Madras Information

Published every month by the Director of Information and Publicity
Fort St. George

Connemara Public Library
8 JUN 1952

Vol. VI, No. 6 "WE SEEK TO SERVE AND NOT TO COMPETE" June 1952

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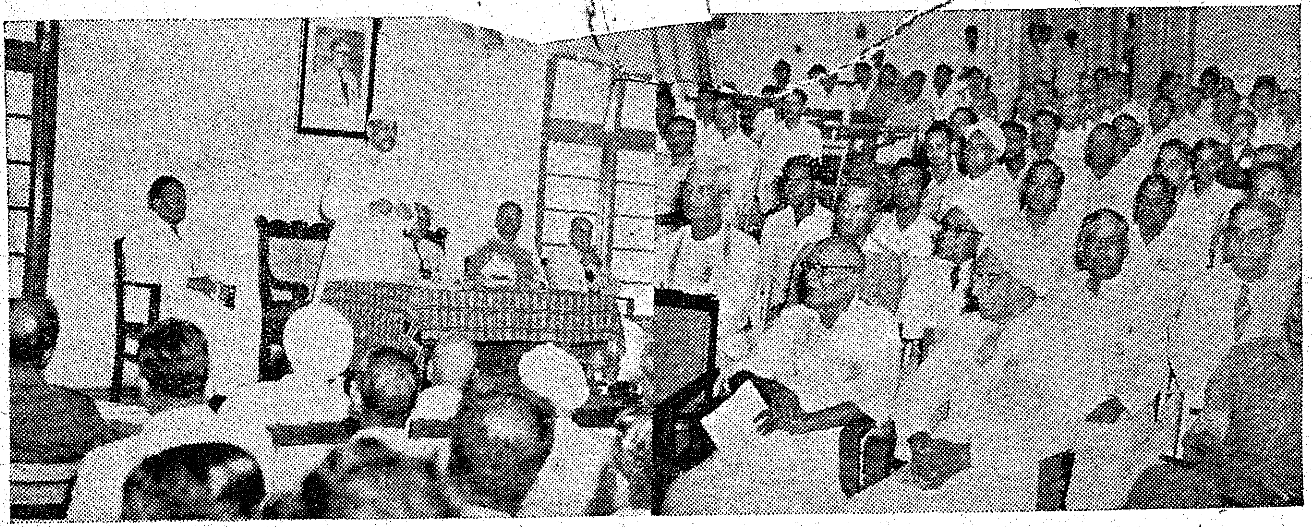
A fine view of the new Assembly Buildings in the (



ENGINEERS' CONFERENCE : H.E. Shri Sri Prakasa, Governor of Madras, recently inaugurated the Annual Conference of the Madras Engineering Association, Public Works Department.

His Excellency told the Engineers : " You will have to harness the great rivers in the north and in the middle of the country, so that the life-giving waters may be available to us at all times."

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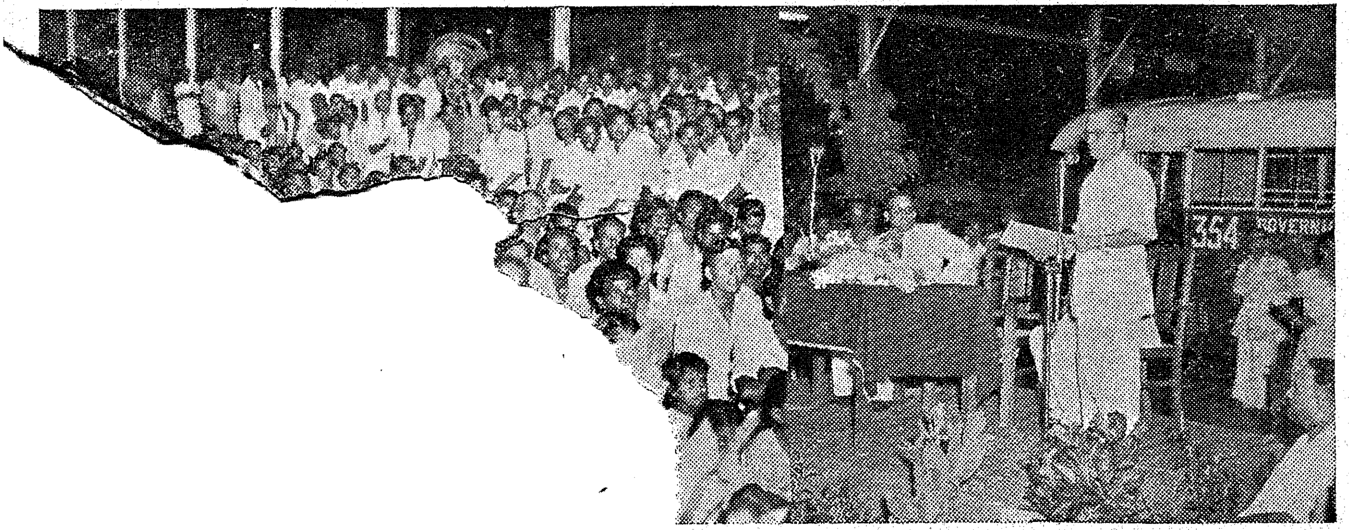

Rao, Hon. Minister for Transport, recently addressed a gathering of

s would be considered and remedied, and appealed to them to extend their

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Adequate Relief Assured to Affected Areas

H.E. the Governor Addresses Joint Session of Madras Legislature

Hon'ble Members of the Legislature !

With this session of the State Legislature, we commence a new chapter in the history of our State. Before I proceed further, I would like to express on behalf of our State our regret at the passing away of King George VI, the Head of the Commonwealth of which our Republic has elected to be a member. The late King worthily upheld the great traditions of the British monarchy and endeared himself to all. We send our people's respectful greetings and good wishes to Queen Elizabeth.

This is the first session of the State Legislature as constituted in accordance with the Constitution of the Republic of India, and I congratulate you on being members of this historic Legislature. A democratic Constitution like ours will be largely what the voters and legislators make of it. The voters have done their part, and it is up to you, the legislators, to help in evolving sound traditions.

A Pledge Fulfilled

In his address at the commencement of the last session of the old Legislature, my predecessor assured the Hon'ble Members of that Legislature, and through them, the general public, that the Government were determined to do all that lay in their power to ensure that the general elections were conducted with absolute impartiality and fairness to all the contesting parties and candidates, and appealed for the co-operation of all the parties for achieving that result. I think we may claim that that assurance has been fulfilled. The largest share of the credit for this result must go to the several millions of voters, men and women, who exercised their franchise in an orderly manner.

My Government assumed office on 10th April 1952. Owing to the shortness of time between that date and now, my Address will not cover as much matter as ordinarily, at the beginning of a session, the Address may be expected to deal with. We could not possibly postpone this sitting in view of clause (1) of Article 382 of the Constitution. After completing the necessary business at this sitting, it has been decided that you will be called upon to gather again in June and I shall address you again at the commencement of that sitting under clause (1) of Article 175. At that sitting of the Legislature, the full Budget for the current financial year will have to be passed, and it will be an occasion when there can be a comprehensive review of all matters which are important from the point of view of the welfare and development of the State.

Address by H.E. Shri Sri Prakasa, Governor of Madras, to the Joint Session of the Madras Legislature, on May 6, 1952.

Relief Measures in Stricken Areas

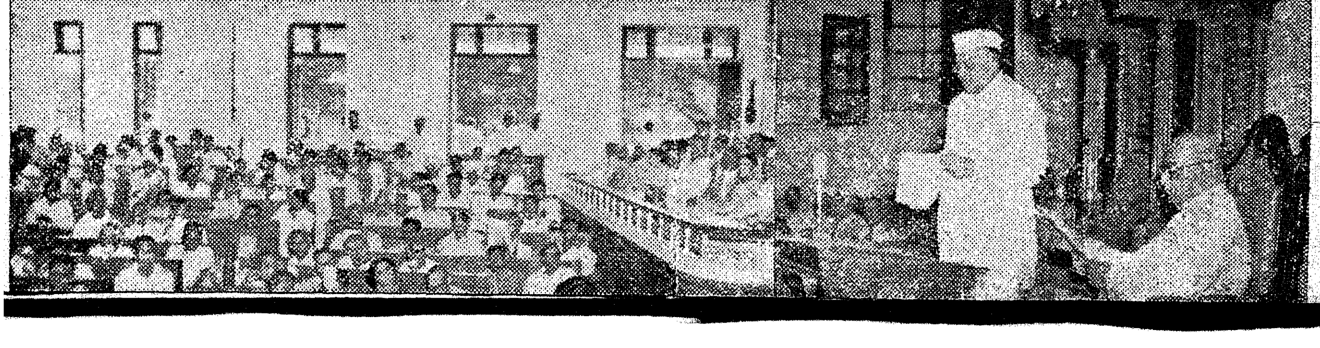
During the financial year 1951-52, this State experienced a failure of both the monsoons for the fifth year in succession. Cultivation of food crops suffered most seriously in four entire districts and in parts of six other districts. Relief measures have been extended to the affected areas by the grant of liberal wet and dry remissions and by providing relief works for labourers thrown out of employment by reason of this drought. The collection of takkavi instalments has been postponed till the next fasli year in these areas. Takkavi and subsistence loans and loans for deepening field wells are also being sanctioned on a liberal scale in the affected areas. To meet the distress caused by the drought, drinking-water wells are being deepened in a large number of places.

The Army of India is rendering great assistance in this respect. A number of water lorries have been loaned by them for distribution of water in the areas where scarcity of drinking water is most acute. Gruel centres have been opened in large numbers and free gruel is served to infirm and disabled persons and to women and children. The Government of India have sent a large quantity of multi-vitamin tablets and milk powder for distribution in the areas of distress.

Fodder and Grain

To relieve scarcity of fodder, the reserved forests in the districts of Cuddapah, Chittoor and Anantapur have been thrown open for free grazing and free removal of hill grass. Arrangements have also been made to import fodder and grass from the surplus districts and to sell them at concessional rates to the ryots in the drought affected districts, where purchasing power has been considerably reduced. Several voluntary organizations have

JOINT SESSION: H.E. Shri Sri Prakasa, Governor of Madras, addressing the Joint Session of the Madras Legislature (Assembly and Council), on May 6, 1952. This is the first Joint Session of the State Legislature as constituted in accordance with the Constitution of the Republic of India.



Reconstitution of Rayalaseema Development Board Ordered

The Government have directed that the Rayalaseema Development Board be reconstituted with the following as members :—

The Hon'ble Minister in charge of Rayalaseema Development—Chairman ; The Development Commissioner—Secretary ; The Hon'ble Minister (Agriculture) ; The Hon'ble Minister (Local Administration) ; The Hon'ble Minister (Co-operation) ; Five members of either House of the Legislature—one from each of the five districts ; Five members of the public—one from each district ; Not more than five members of the public of the State from among those who are actively interested in the development of Rayalaseema Districts ; the Chief Engineer (Irrigation) ; the Chief Engineer (Electricity) ; the Chief Engineer (Highways) ; the Registrar of Co-operative Societies ; the Director of Agriculture ; the Director of Industries and Commerce.

offered free gifts of fodder and grain, and transport facilities have been arranged at State cost for moving them to the affected areas. The Prime Minister of India has most generously assisted us from his Relief Fund. A Madras State Famine Relief Fund has been organised and I trust there will be good response to our appeal.

The Government of India have assisted us to find ways and means accommodation to the extent of two crores of rupees by purchasing securities held by the State Government, and have agreed to make a free grant not exceeding Rs. 48 lakhs to help run gruel centres. We are most grateful to the Government of India and to the voluntary organizations for all their assistance. My Government will endeavour to give adequate relief in all the areas where there is distress on account of the failure of the monsoons.

Food Situation

Owing to the successive failure of the monsoons during the last five years, the food situation in the State continues to be difficult. The latest estimates indicate that the production of rice this year will be less than the normal by nearly ten lakhs tons and the production of millets by nearly four lakhs tons. Allotments by the Government of India from the All-India pool will be mostly in the shape of wheat and milo, and the rice quota is expected to be less than two lakhs tons. As against this it may be noted that we have been lucky to some extent in seasonal conditions in the surplus districts, and there is no reason to apprehend that there will be any deterioration in procurement.

The Government of India have permitted this State to increase the procurement price of paddy by one rupee per maund up to the end of May this year, in addition to the increase of eight annas per maund sanctioned in December last. This will not affect the consumer's prices.

The recent general slump has resulted in considerable distress to those engaged in the large handloom industry of this State. My Government are giving anxious thought to this subject and will announce the measures which they propose to take after consulting all the interests concerned.

Urgent Piece of Legislation

There is an urgent piece of legislation to be put through at this meeting of the Legislature. It relates to immovable properties which were requisitioned for purposes of the State Government under the Defence of India Rules during the last War and which continued to be subject to requisition under Central Act XVII of 1947, the life of which was extended for a period of one year from 1st April 1951 by Madras Act II of 1951. As the work of de-requisitioning of these properties could not be completed before the end of March 1952, immediate action had to be taken to extend the life of the Central Act referred to, for a further period of one year from 1st April 1952.

The Requisitioned Land (Continuance of Powers) (Madras Amendment) Amendment Ordinance, 1952 (Madras Ordinance I of 1952), extending the life of the Central Act till 1st April 1953 in respect of immovable properties requisitioned for State purposes, was promulgated on the 31st March 1952. A self-contained Bill replacing this Ordinance will be introduced during the present sittings of the Legislature.

I have done. I am sure that your debates and deliberations in this and future sittings of the new Legislature of this State will be conducted with the same high sense of public duty and responsibility as in the past, and I pray that you may be guided by faith, courage and wisdom in your counsels.

House Rent Allowance Scheme Extended by Another Year

The Government have sanctioned the continuance of the scheme of House Rent Allowance to Government servants on a pay not exceeding Rs. 150 per mensem, employed in the Madras City, mofussil municipalities and taluk headquarters, for a further period of one year from April 1st, 1952.

Tractor to Supply Water

The Government have ordered that 20 small type (18·5 h.p.) tractors and trailers, available with the Agricultural Department, may be provided each with a tank and pump with pipes and fittings and employed for supplying water to the people in the areas which have been affected by adverse seasonal conditions and where water scarcity is acute. The Governmemt have sanctioned an expenditure of Rs. 60,400 in this connection.

Scarcity Conditions in Madras State

By SRI S. K. CHETTUR, I.C.S., Secretary, Revenue Department, Madras

I shall attempt to survey the nature and extent of the scarcity conditions existing in several districts of this State and then outline the measures which have been undertaken both by Government and by non-official agencies for their alleviation of distress. How far these measures have been successful, it is perhaps too soon to judge. There have been numerous criticisms that the Government have not faced up to the famine; that they have hesitated to declare as famine areas parts of the State which are really in the grip of famine and that their measures to meet the situation have been inadequate and ill-timed.

First, as to the areas in which these conditions obtain, it is now common knowledge that the whole of the Rayalaseema with the exception of Bellary District and portions of Kurnool District have been badly affected by a severe drought this year. This drought has itself come on top of four successive years of lean rainfall. In addition to the districts of Rayalaseema, very severe scarcity conditions obtain in North Arcot, Chingleput and the Dharapuram Taluk of Coimbatore District and to a lesser extent in portions of South Arcot and the Pudukottai Division of Tiruchirappalli; Vinukonda Taluk and Palnad in Guntur District have also been affected. Tanks, wells, rivers and in some cases even spring channels have completely gone dry. There is very little water for cattle and there is scarcity of drinking water for human beings.

Agriculturists Hard Hit

The ryots who subsist by agriculture have been very hard hit because the earth has yielded none of its usual crops and there is no use of trying to cultivate afresh as there is not sufficient water to bring any crop to fruition. As a result, the unemployment problem for the agricultural labourer is most acute. The income earning capacity of the ryots having thus fallen to almost zero, many of them are faced with the inability to buy even the essential foodstuffs for their daily life.

It was in this emergency that the State stepped in nearly eight months ago and devoted all its attention to the primary task of affording employment for the ryots and for the landless agricultural labourers, for it is common knowledge that there is no scarcity of foodgrains in the area. Those who have visited these districts can testify to the fact that there are several fair price shops from which grain of the variety popular in the area can be purchased. The effect, however, was that most of the ryots and the landless labourers were faced with the prospect of having nothing to do simply because the rain had failed for five successive seasons and the earth was too hard to till and even if tilled would have yielded no results.

Programme of District Work

This is exactly where the Government with wise prescience began amplifying their programme of district work to afford employment as early as in September 1951. The usual methods by which work is afforded is by amplifying the District Board programme for road works and also the rural water-supply scheme for the digging of new wells. Side by side with this there would be in each district a considerable amount of normal work on irrigation projects and on repairs to major irrigation and minor irrigation tanks. The Government felt that this method of anticipating distress by affording employment was sounder than the method mentioned in the Famine Code of opening a test work with all concomitants of a costly organization to run it.

The Government also helped the ryot by liberal large-scale remissions both on wet and dry lands. In the case of wet lands all lands which yielded the crop below four annas were given full remission and those which yielded the crop between four annas and eight annas were given half remission. At the same time orders were issued for the suspension of the collection of kists in the affected areas. The Government also encouraged the ryot to apply for loans both for land improvement as well as for digging wells, and in addition to this offered to grant subsistence loans to enable the ryots to tide over the lean season.

Grant of Loans

To quote voluminous statistics in a talk is tiresome; as one humourist said, the statistics that he could remember was the one that if you put all the persons who went to sleep in church end to end they would be very much more comfortable! But it has to be mentioned that Government envisaged the spending of Rs. 1·23 crores for the grant of loans under the Land Improvement and Agriculturists Loans Act and Rs. 52·37 lakhs for the grant of subsistence loans. These latter loans are also to be free of interest. In order to bring employment as close as possible to the doors of the villager, Government have recently decided that the silt in the bed of minor irrigation tanks would be scooped out and utilised to raise the bunds to a height of one foot and a width of two feet above accepted maintenance standards. As these minor irrigation tanks are studded all over the taluk in nearly every one of the affected districts, it follows that the work afforded by this measure will be within easy reach of almost all the villages in the area.

Further, Government have recently issued clear instructions to the Collectors to utilise this opportunity to improve conditions in the villages themselves. Thus ugly approaches to the villages are to be levelled and cleared up and made attractive. Mounds of earth will be put up around avenue trees; a common prayer hall or mantapam will be built for the common use of villagers and the choultries which have fallen into disuse and decay will be renovated or new ones built. Thus in every direction the labour of the villager will be utilised in activities which will ulti- mately yield him a new amenity or a much needed improvement in the conditions of his village life.

A suggestion has been made that we should utilise this opportunity to build a large number of new minor irrigation tanks by bunding up places where there are shallow depressions and converting them into tanks. But this scheme, though it sounds excellent at first sight, proves to be not feasible on closer examination as the indiscriminate setting up of bunds in various places will obstruct

the flow of water to existing tanks and affect the catchment area for irrigation under them and consequently lead to a crop of law suits. Government, however, are fully alive to the need for a long-term solution to the problem of scarcity conditions in an area like Rayalaseema and it seems clear that there is a move towards undertaking various long-term irrigation projects in this area with a view to making the supply of water for irrigation purposes more definite and assured. But this long-range policy will necessarily take many years to implement.

Opening of Gruel Centres

It is necessary to examine the various forms of direct relief administered by Government in addition to those indicated above. As the ryot or landless labourer gets only one rupee a day as wages for his work, it is obvious that this will not help him to support his wife and children. Government have therefore opened a large number of gruel centres, the object of which is to feed the wives and children and other dependents of the ryots who are unable to work for themselves and earn a wage. In addition, there are people disabled either by illness or old age from the capacity to work, and these are also fed at the gruel centres. Gruel centres are also catering to the floating population of beggars in and around the village—the poor are always with us—who are helpless owing to the contraction of private charity. The earliest gruel centres were opened and run successfully in several districts out of the grant of one lakh and seventy-five thousand rupees made by the Prime Minister, and the allotments in each district were supplemented by private charity in the district, and the gruel centres were administered by non-official local committees. But the situation has now become so grave that Government have stepped in and have opened gruel centres out of the State revenues, and the Government of India have offered to pay half the cost up to a total of rupees 48 lakhs.

During H.E. the Governor's tour in Rayalaseema a new recipe was tried in these gruel centres in order to make the gruel more attractive, and it was discovered why a mixed gruel consisting of red cholam, a small quantity of rice, a small quantity of greengram and shavings of onions, when boiled and served with a pinch of salt or a flavouring of pickle was extremely palatable. His Excellency tasted the gruel and pronounced it good, though he added that he would not undertake to live continuously upon it. Through these gruel centres are distributed various gifts received from public-spirited bodies and associations, gifts such as multivitamin tablets, eggs, parcels of foods and gifts of clothing for the women.

Various philanthropic bodies like the Andhra Mahila Sabha, the Rayalaseema Famine Fund Committee, the Ramakrishna Mission and the Friends Service Unit are working in the areas, and the first named is arranging for work centres where the wives and daughters of ryots will be taught some useful trade like khadi spinning, mat weaving, basket making, embroidery, etc. The running of gruel centres and work centres cost considerable sums of money and it is only natural that in times of grave distress those who are wealthy and well-to-do should stretch out a helping hand to their brethren who are suffering. Hence the idea of forming the Madras State Peoples' Famine Fund would be a central reservoir of philanthropic efforts throughout the State.

Army Aids Relief Work

Even more alarming than the scarcity of employment was the remarkable scarcity of water, particularly in the Rajampet and Rayachoti taluks of Cuddapah, in two or three taluks of Anantapur and in Cumbum and Markapur of Kurnool. Tahsildars had already been directed to deepen existing wells where necessary and to dig new wells where deepening proved unsatisfactory. Government diverted a number of drills and compressor sets in these areas. The Famine Commissioner launched an ambitious scheme by which Rs. 150 was to be given to the villagers of any village who required urgently to deepen an existing private or public well in order to obtain a supply of water. If this amount was not sufficient, the villagers should contribute the balance either in money or in labour.

Just at this time we received very timely and energetic help from the Army, who very kindly undertook to send a Company down to the area in order to dig wells expeditiously with mechanical drills and compressors. The entry of the Army into this area close on the heels of a visit by H.E. the Commander-in-Chief has had a good psychological effect on the morale of the villagers and reports to hand show that there is plenty of co-operation between the villagers and the Army in this matter of digging the wells. The gratitude of both the State and the villagers are due to the Army for this help in time of need.

In addition to this, the army has lent to the Famine Commissioner a large number of trucks, lorries and water tanks for the purpose of organising mobile units by which water is transported from a water source to a village or group of villages where there is no water at all. This scheme had been launched already in four districts and is working satisfactorily. In certain lucky areas which are close to the railway line, a certain quantity of water is being supplied to villagers along the lines from the tenders of the railway engines, and the Railway Board has authorised the continuance of this help.

Organised Attack

It is thus clear that considerable amount of organised attack on the scarcity conditions has been going on for the last eight months. It is this which has more or less nipped a possible famine in the bud. When I had the privilege of accompanying His Excellency on his tour in Rayalaseema, I paid particular attention to watching the faces and the physical conditions of the local inhabitants. The spectre of famine which is usually associated with gaunt sticking out ribs, emaciated faces and thin claw-like clutching hands was totally absent. It was only in cases of very old men and very old women that such conditions appeared and these were due to old age rather than to any famine. Yet it is true that a considerable amount of writing in the papers has been done in order to make it appear that there is a very severe famine in several areas. The newspapers occasionally reported one or two starvation deaths from certain areas. All these were duly investigated by the Collectors concerned and the evidence obtained from the local villagers that they died of natural causes such as fevers and other longstanding illness and not of starvation.

Government are, however, alive to the necessity for attending to the treatment of deficiency diseases in Rayalaseema. Recently a philanthropic gentleman from Madras

[library stamp] 9 JUN 1959

GENERAL CARIAPPA VISITS FAMINE-STRICKEN AREAS: General K. M. Cariappa, C-in-C (Army), paid a two-day visit to the famine-affected area of Rayalaseema, where the Army is providing relief by deepening of wells and other facilities for the distribution of water. Travelling over 250 miles by road, the C-in-C visited nearly every famine-affected village in Chittoor and Cuddapah Districts.

The local leaders of Cuddapah District thanked General Cariappa for the ready help offered by the Army. Photo shows General Cariappa discussing the famine situation with the people of the affected area.

has equipped a mobile van with medicines and taken it to Cuddapah. There are bound to be some cases of malnutrition in the area and so the decision to form a Committee in Madras City for medical relief in Rayalaseema is no doubt a step in the right direction. Side by side with the steps taken to alleviate human distress were the measures to secure food for the cattle. Reserve forests were thrown open for grazing, and fodder has been purchased from the surplus districts and conveyed to the scarcity areas. Baled hill grass has also been supplied. Government have subsidised the sale of these at low prices.

Faith Will Fetch Rain

Speculation is rife as to how long we must expect these scarcity conditions to continue. The weather experts assure me that in May thunder showers may be expected in Rayalaseema, but that the south-west monsoon which is expected in June and July does not convey much benefit to Rayalaseema proper. This monsoon gives, however, a fair proportion of rain to Guntur District in June-July and if it is favourable this year we may expect scarcity conditions in Vinukonda, Palnad and in Narasaraopet to abate by the end of July. All the five districts of Rayalaseema normally get five to six inches of rain that the onset of the north-east monsoon in September should depend for their greatest rainfall on the north-east monsoon. North Arcot also like Madras benefits from this monsoon. So we may take it that general relief over the area will come from a satisfactory north-east monsoon.

The question whether the God Varuna will shower His gift of rain on these parched uplands in these seven districts is one which must necessarily agitate all thinking persons; but those who have the gift of faith may exercise more than thought; they may go down on their knees and pray to the God for rain or if they are more learned they may enter upon the 12-day *Yagna* by which the Goddess is propitiated and sends Her gifts of rain. I should like to close on the note of hope that the combined prayers and good wishes of all those who have watched the sufferings of people in this area would bring a change of season that will effectively end the drought now prevailing in the areas standing and usher in an era of greenness and plenty where the land is at present arid and barren and vile.

(*By Courtesy, A.I.R., Madras*)

Relief to Victims of Fire Accidents in Rayalaseema Districts

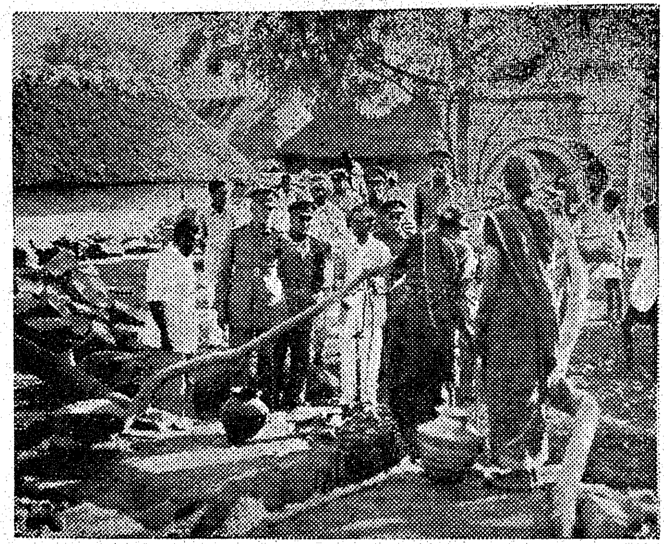
The Government have instructed the Collectors of the Rayalaseema districts to make a liberal use of their discretion to relax the limit of the ceiling rates of assessment, which entitle the victim of a fire accident in Rayalaseema districts to the grant of relief in deserving cases.

Army Goes All out in Rayalaseema

More men and material of the Army have been pressed into service in the water scarcity areas of Rayalaseema where the Army is conducting an "Operation Famine Relief" to help the civil authorities. More Army engineers arrived recently in Anantapur. Fifteen more compressors for widening and drilling wells with a large number of force and hand pumps have been sent to Cuddapah for distribution in the various water scarcity zones, while thirty more water tankers for carrying water are being sent. In addition 500 new barrels of 34 gallons capacity have been supplied for carrying water by hand or in bullock carts by the villagers.

The Army is determined to bring water to the arid and parched land of Rayalaseema with the greatest speed and efficiency. They commenced work on April 15 after General Cariappa, Commander-in-Chief, Indian Army, had toured the stricken areas. Within the first ten days of their work in spite of the present shortage of equipment and with the engineers still moving in from all parts of the country—the Army has successfully deepened six wells, increasing their capacity ranging from 200 gallons to 400 gallons of water per hour. The wells have had to be dug between three to six feet. Two more wells were deepened, one about seven feet and the other about six feet six inches but the work had to be abandoned due to hard granite base.

The troops are living in "War" conditions. There are no holidays for them. Sundays are also working days. They have been located in villages nearest to their work and housed in school and college buildings which are lying vacant due to summer holidays. Strict instructions have been issued to the men to carry their Army rations and cook their own food to avoid their being a burden on the villages. Even the drivers who man the water-tankers which go about distributing water carry their own food and a day's supply of water. They are not allowed to take water from the water-tankers.



WELL INSPECTION: General Cariappa inspecting a dried up well along with the local officials, in the distressed areas.

These men are conscious of their responsibilities. They work in two shifts and the work is carried on incessantly from ten to twelve hours a day. Practically all the drivers of water-tankers had themselves volunteered to work.

The task of the Army is twofold: to deepen and widen wells and to distribute water in the scarcity areas. The Army has so far been called upon to deepen 265 wells in Kurnool District, 66 wells in Cuddapah District, 300 wells in Chittoor District and 44 wells in Anantapur District.

Each District Collector has provided a list of wells which have to be deepened in their order of priority. These are surveyed by the Army sappers before commencing their work. The object is to provide each village with one or two wells to satisfy their needs. Each Engineer unit which goes out to deepen wells is equipped with such instruments as a rope ladder to descend into the wells, hammers, pickaxes, drilling machines, pneumatic hose and compressor machines. They are also supplied with explosives.

For the distribution of water there are a number of Army trucks which have been fitted with water-tanks with a capacity varying from 200 to 500 gallons. These tankers collect water from "water-points" or reservoirs or wells and go into the interior of the villages to distribute water. Before the water is distributed, it is properly treated with bleaching powder.

For purposes of administration and work three zones have been created. These are the Cuddapah, Chittoor and Anantapur zones with the Kurnool District coming under the Cuddapah zone. The headquarters is Madras where policies are laid down and overall action planned in consultation with Sri V. S. Hejmadi, Famine Commissioner, Madras. Each zone has a wireless radio link and Cuddapah has a direct telephone and rail communication with Madras. There are at present two officers in control of the work at Cuddapah. Lieut.-Col. C. W. Muelleneus has overall administrative control while Lieut.-Col. Talwar is commanding the Engineers.

Government Loan for Water Supply in Chittoor Municipality

The Government have sanctioned an advance of Rs. 60,000 as loan to the Chittoor Municipal Council, for meeting its expenditure on the emergency measures connected with water-supply.

This was in response to the resolution passed by the Municipality, requesting the Government to sanction as a special case a loan of Rs. one lakh and an equal sum as grant to meet the expenditure involved in undertaking emergency measures to meet the water scarcity in the Municipality. The Municipal Council will be permitted to draw the amount at Rs. 10,000 per month according to necessity and it will not be permitted to draw any amount, if the water position improves on account of good rain in the meantime.

9 JUL 1952

Artesian Wells in Madras State

In July 1950, the Madras Government sanctioned Rs. 8,08,000 for sinking 101 artesian wells in South Arcot District under the Intensive Cultivation Schemes, and the Director of Industries and Commerce was put in charge of executing the artesian wells scheme as expeditiously as possible so that the entire work might be completed by the end of June 1951. It was also the intention of the Government that at least one crop of paddy should be raised by the ryots every year in the lands benefited by the artesian wells. The Government also considered it possible for the ryots to grow at least one short-term paddy every year as plenty of water supply from the artesian wells would be available all the year round. Up to March 1952, 67 wells were completed under the scheme, bringing 2,647 acres of land under Intensive Cultivation and resulting in an additional production of 1,420 tons of foodgrains. It would be of interest to note the following details on artesian wells :—

1. The life of artesian wells depends on various factors. Wells may stop flowing either due to the exhaustion of the artesian spring or due to corrosion of the casing pipes which are generally of steel. In the artesian basin of South Arcot, there are artesian wells from where water has been continuously flowing for as many as 20 years, while in a few cases artesian wells in the same basin have collapsed in the course of five to ten years.

2. It is possible to shut out water from artesian wells during specific periods without affecting the flow of water from the well. This practice is in vogue in some parts of India and in the United States of America. In South Arcot District steps have not so far been taken to shut out water. There is, however, a general impression that such shutting out, even temporarily, will tend to reduce the flow of water. Proposals for undertaking research in this direction are under the consideration of Government.

3. The minimum distance between the two artesian wells in an artesian basin will depend on various factors. The principle factor is the intake of water by the aquifer.

The number of sub-artesian wells put down by the Industries Department in the various districts will be over 25,000. The important successful sub-artesian wells occur in the following districts :—

Name of District.	*Name of Taluks.*
Chingleput	Kancheepuram and Ponneri.
Chittoor	Chandragiri, Puthur and Kalahasti.
North Arcot	Gudiyattam, Cheyyar and Tirupattur.
South Arcot	Tindivanam, Villupuram, Cuddalore, Chidambaram and Vriddhachalam.
Tanjore	Mannargudi, Shiyali and Tanjore.
Coimbatore	All taluks.
Nellore	Gudur and Kovur.
Guntur	Ongole and Tenali.
Krishna	Krishna Basin.
Godavari	Godavari Basin.
Visakhapatnam ..	Anakapalle and Visakhapatnam.

About 55 artesian wells have been sunk for private parties in South Arcot. Most of these were sunk by departmental sets but a few were sunk with private hand-boring sets owned by boring contractors.

Hand-boring sets and power drills are made available by the Industries Department to people who want to use them for sinking artesian wells sanctioned by Government for implementation in the South Arcot District. The Industries Department have been sinking such wells for private parties during the past 25 years.

Artesian wells also occur in the East and West Godavari Districts. Sixty-four wells have been put down by Government for private parties. Proposals for putting down 100 artesian wells at Government cost in the East and West Godavari Districts are under the consideration of the Government.

The artesian well water from South Arcot has been analysed by the Chief Water Analyst, King Institute, Guindy. The analysis indicated that the artesian well waters are acidic in character, the PH ranging from 6·4 to 6·6 and that the water was super-charged with carbon dioxide, the carbonic acidity ranging from 11·0 to 23·0 parts per 100,000 as Co 2. It has also shown that these waters are aggressive in character and will corrode linking pipes.

No adverse effects on crops have been reported so far from the artesian area. On the other hand, reports received in this office indicate that the artesian water in South Arcot is very good for cultivation.

Pudukottah Channel

Pudukottah State is situated close to the Cauvery Delta and yet it did not get the benefits of irrigation from Cauvery so far. Not even after the construction of the Mettur Dam and excavation of the Grand Anicut Canal which is taken just outside the limits of the State; the dream of the people of this State for a share of the waters was taken up after the merger of the State with Madras and has resulted in the Pudukottah Canal Scheme, benefiting 2,300 acres of Pudukottah Taluk and 4,000 acres in Pattukottai Taluk.

The new channel, now named as "Pudukottah Channel", is an enlargement and continutation of an existing small channel named "Olavayal main channel" taking off from Grand Anicut Canal at R.D. No. 20/34 and also the Olavayal No. 2 Channel, irrigating at present an area of 1,278 acres. This channel is now proposed to be remodelled and extended for a length of 12 miles with the necessary cross-masonry works and distribution systems to benefit 6,300 acres of new ayacut.

In order to bring the channel to beneficial use immediately the scheme was divided into two stages. The estimated cost of the scheme was Rs. 10,41,510 out of which the first stage of the scheme for a length of five miles, irrigating an extent of 2,300 acres in Pudukottah Division of Tiruchirappalli District and costing Rs. 4,40,500, has been completed.

The work in the second stage which consists of extending the channel for another seven miles for irrigating the balance of 400 acres in Pattukottai Taluk of Tanjore District has been taken up, and it is expected to be completed before the next irrigation season.

Electricity Extension Schemes Sanctioned

The following extension schemes were sanctioned by the Government :—

Mettur Electricity System.—(1) Extension of supply of electricity to 14 agricultural services and one industrial service at Tiruvannainallur village in Tirukkoilur Taluk, South Arcot District, at an estimated cost of Rs. 52,800 ; (2) Extension of supply of electricity to 42 agricultural pumpsets at Sengunam and Pottarai villages in Polur Taluk, North Arcot District, at an estimated cost of Rs. 1,19,600 ; (3) Extension of supply of electricity to 73 agricultural pumpsets and one industrial service at Valpady, Mothur, Kallithangal Kalpundi and Karamedu villages in Arni and Cheyyar Taluks, North Arcot District, at an estimated cost of Rs. 1,87,000 ; (4) Extension of supply of electricity to 50 agricultural pumpsets and two industrial loads at Pannaiyur village in Arni Taluk, North Arcot District, at an estimated cost of Rs. 1,33,500 ; (5) Extension of supply of electricity to 40 agricultural pumpsets at Kannikapuram, Karthikayapuram, Tiruttani Rural, etc., villages in Tiruttani Taluk, Chittoor District, at an estimated cost of Rs. 1,20,200 ; (6) Extension of supply of electricity to 48 agricultural pumpsets at Kilanathur village in Tiruvannamalai Taluk, North Arcot District, at an estimated cost of Rs. 1,03,800 ; (7) Extension of supply of electricity to 69 agricultural pumpsets at Veeranarayanapuram and Mudur villages in Arkonam Taluk, North Arcot District, at an estimated cost of Rs. 1,40,500 ; (8) Extension of supply of electricity to 40 agricultural pumpsets at Kilapadi and Olali villages in Wallajah Taluk, North Arcot District, at an estimated cost of Rs. 1,12,400 ; (9) Extension of supply of electricity to 40 agricultural pumpsets and one industrial load at Ettikuttaipatti village in Omalur Taluk, Salem District, at an estimated cost of Rs. 1,01,700 ; (10) Extension of supply of electricity to 46 agricultural pumpsets and two flour mill loads and 34 domestic services at Chinnavarikkam and Periavarikkam villages in Gudiyatham Taluk, North Arcot District, at an estimated cost of Rs. 1,36,400.

Papanasam Electricity System.—Extension of supply of electricity to 79 agricultural pumpsets and 69 house service connections at Kambaneri Pudukundi, etc., villages in Tenkasi Taluk, Tirunelveli District, at an estimated cost of Rs. 1,86,100.

Madras Electricity System.—(1) Extension of supply of electricity to 19 agricultural pumpsets, six industrial services and 49 domestic services and 40 street lights at Madhavaram and Polal villages at an estimated cost of Rs. 1,51,600 ; (2) Extension of supply of electricity to 45 agricultural pumpsets and four industrial services at Aryaperumbakkam, Kilambi and Baluchettichattram villages in Kancheepuram Taluk, Chingleput District, at an estimated cost of Rs. 1,37,200.

Mettur Electricity System.—(1) Extension of supply of electricity to 30 agricultural pumpsets, four industrial loads and 46 house service connections at Nerur village in Karur Taluk, Tiruchirappalli District, at an estimated cost of Rs. 1,21,700 ; (2) Extension of supply of electricity to 80 agricultural pumpsets and 23 house service connections at Valkadai, Kalanipakkam and Naval villages in Cheyyar Taluk, North Arcot District, at an estimated cost of Rs. 1,84,100.

Papanasam Electricity System.—Extension of supply of electricity to 68 agricultural pumpsets and 63 house service connections at Mahandravadi and Kilanilidanallur villages in Pazhamcottai Firka, Sankarankoil Taluk, Tirunelveli District, at an estimated cost of Rs. 1,93,000.

Pykara Electricity System.—(1) Extension of supply of electricity to 39 agricultural pumpsets in Kadambadi village, Palladam Taluk, Coimbatore District, at an estimated cost of Rs. 1,07,950. (2) Extension of supply of electricity to 61 agricultural pumpsets in Kanur village, Avanashi Taluk, Coimbatore District, at an estimated cost of Rs. 1,60,600.

Mettur Electricity System.—Extension of supply of electricity to 42 agricultural pumpsets and one industrial load at Karapattu, Kilathaniyalampattu and Semangalam villages in Tirukkoilur Taluk, South Arcot District, at an estimated cost of Rs. 1,39,500. Extension of supply of electricity to 108 agricultural pumpsets and four additional loads and one industrial service at Takkolam village in Arkonam Taluk, North Arcot District, at an estimated cost of Rs. 1,94,700. Extension of supply of electricity to 53 agricultural pumpsets and five industrial loads at Koratai and Adhiyur villages in Tirupatur Taluk, North Arcot District, at an estimated cost of Rs. 1,57,300. Extension of supply of electricity to 45 agricultural pumpsets and one industrial service at Periagaram village in Polur Taluk, North Arcot District, at an estimated cost of Rs. 1,22,400.

Extension of supply of electricity to 55 agricultural pumpsets at Gudalur, Vakkilapattu and Serpapattu villages in Chengam Taluk, North Arcot District, at an estimated cost of Rs. 1,96,500. Extension of supply of electricity to 48 agricultural pumpsets and two industrial services at Karpundi and Kuralpakkam villages in Polur Taluk, North Arcot District, at an estimated cost of Rs. 1,58,300. Extension of supply of electricity to 29 agricultural pumpsets, two industrial services and 41 house service connections at Kavettirangampalayam, Konagapadi and Karukkalvadi villages in Omalur Taluk, Salem District, at an estimated cost of Rs. 1,28,200. Extension of supply of electricity to 57 agricultural pumpsets, five industrial loads and 29 house service connections at Kamalapuram and Pottipuram villages in Omalur Taluk, Salem District, at an estimated cost of Rs. 2,23,500.

Papanasam Electricity System.—Extension of supply of electricity to 50 agricultural pumpsets and 216 house service connections at Mallankinar, Reddiarpatti, Koilpatti, Surampatti and Timmappatti villages in Ramanathapuram District at an estimated cost of Rs. 1,54,800. Extension of supply of electricity to 91 agricultural pumpsets and 74 house service connections at Sayamalai village in Pazhamcottai Firka, Sankarankoil Taluk, Tirunelveli District, at an estimated cost of Rs. 1,87,200.

Pykara Electricity System.—Extension of supply of electricity to 57 agricultural pumpsets at Velrasikalipalayam and Vadamalaipudur villages in Palladam Taluk, Coimbatore District, at an estimated cost of Rs. 1,28,800.

A Saint Gave India Coffee

To-day, India is drinking more coffee than it used to five years ago.

It all started with a humble and anonymous plant that once grew uncared for and wild in the hilly regions of Abyssinia but which has since then elbowed its way into commercial prominence in the modern world—the coffee plant.

At present, along with the other countries of the world, coffee is grown widely in certain areas of India, too. The growing of coffee might as well be called the story of the 25th parallel, because the limits of cultivation of the coffee plant may be put down roughly as the 25th parallel of latitude north and south.

The coffee plant is supposed to have been introduced into India by a Muslim saint who came from Mecca and made his home in Mysore. Some of the hilly areas of Mysore where coffee plantations thrive even today bear his name—Baba Budan.

A small tree with many branches, the coffee plant usually reaches heights ranging from 15 to 20 feet. The fruit is red, and contains two inter-linked seeds. These separated, constitute the commercial coffee berry. And this, roasted and ground, produces the coffee powder for domestic use.

A slightly temperamental tree, coffee grows well on altitudes ranging from 2,500 feet to 5,000 feet. Usually, hilly slopes offer the ideal location for coffee plantations. The coffee tree requires abundant rainfall—anything up to 150 inches. In a way, the coffee tree seems to be allergic to heavy clouds.

As a commercial product coffee occupies a prominent place in Indian economy. In 1949–50, there were 10,218 coffee plantations in India, according to the Directorate of Economics and Statistics, Ministry of Food and Agriculture. These plantations covered an area of 386,025 acres, showing an increase of over 1,000 plantations and over 20,000 acres as against the previous year.

The area actually under coffee in 1949–50 was 218,023 acres. Madras, Mysore and Travancore-Cochin showed an increase in production during 1949–50, Mysore accounted for 48 per cent, Madras 28, Coorg 20 and Orissa and Travancore-Cochin together four per cent.

Coffee plantations in India gave employment to some 177,297 people in 1949–50. These constitute permanent garden labour and both permanent and temporary outside labour.

India exports a substantial quantity of coffee. The best customer in 1949–50 was the United Kingdom, followed by Switzerland, Italy and Turkey. In 1949–50, Indian exports of coffee touched 55,526 cwt. but in the previous year India had exported only 626 cwt.

Coffee consumption in India has gone up in recent years. A noticeable increase is seen in the home consumption of coffee during the past few years. From 12,793 tons in 1946–47 it rose to 15,094 tons in 1947 and to 19,061 tons in 1948–49.

COFFEE GARDEN WORKER: Yes, where to start now? Sickle in hand ready for the day's work, is this typical coffee garden worker in a South Indian plantation. Against the cold of mountain slopes she wears a thick blanket as apron-cum-slipover.

Crop Competition Fortnight

The Government have directed that the fortnight from June 1, 1952, to June 14, 1952, may be observed as the Crop Competition Fortnight in all the districts in the State.

In districts where harvesting of the competition plots in respect of the competition of 1951–52 is over, arrangements are to be made to have the prizes distributed during this fortnight.

Treasure from Trash

By Sri S. V. PARTHASARATHY, Sugarcane Specialist-in-charge, Anakapalle.

It is well-known that organic matter in the soil is important not only to keep up good physical structure of the soil but also for providing food for the various micro-organisms that help to release the nutrients for direct consumption by the plant. Any sound system of agriculture should therefore aim at restoring as much as possible of this valuable constituent of the soil; unlike in the case of the mineral nutrients of the soil removed by the plant, which can be made good by addition of suitable commercial fertilisers, the only way of restoring the organic matter is by incorporation into the soil of the plant animal residues rich in the same. The practices of raising special green manure crops and use of animal refuse like cow-dung to enrich the soil organic matter are in vogue since times immemorial.

Sugarcane is a gigantic crop, yielding on average in this State about 30 tons of cane, five tons of trash, and three tons of tops per acre; it grows on the soil for nearly one year. Almost all the portion of tops and trash are waste-products, when the cane is harvested. The green tops are best used as fodder for cattle and returned to the soil through the manure-pit. Trash, however, is bulky and rather difficult for conversion into manure. The easiest way—and this is generally adopted by ryots—of clearing the valuable organic matter, and in this State, more than two lakhs tons of material are lost in this way. The trash can be converted into useful compost, the procedure for which is outlined below.

The cane trash is gathered up either to one corner of the field or to any other convenient place. Pits measuring 20′×10′×2½′ or of any convenient dimensions are to be dug. The trash is first laid into layers of one foot thickness and cow-dung water is sprinkled to moisten this layer. Over this, a layer of green leafy material is spread into a thin layer, the process is repeated and finally covered with a thin layer of soil. In factory areas, where press-mud is available as a factory waste, it can also be spread in intermittent layers, while preparing the heap. It was found that if pig-dung is used, instead of the usual cow-dung, the compost is ripe in a shorter time.

If there is not enough rain, the heap is turned over twice or thrice and moistened with cow-dung water every time. Normally in about five or six months time, the compost will be ready. In areas where the subsoil water is very near the surface the trash is heaped above ground instead of commencing in pits. The decomposition of the trash depends on the moisture condition inside the aeration. After the decomposition has progressed some time, if the heaps are turned more often and wetted to proper levels, the compost will be ready sooner than when it is left in the heap.

Trash compost is valuable bulky organic manure and compares favourably with the farmyard manure. The composition of the manure are compared below:

	Nitrogen.	*Phosphoric acid.*	*Potash.*
	PER CENT.	PER CENT.	PER CENT.
1 Trash compost with pig-dung as starter.	0·76	0·68	0·74
2 Trash compost with cow-dung as starter.	0·57	0·60	0·99
3 Cattle manure	0·48	0·22	0·31

The procedure is simple for any ryot to adopt. However, the difficulties expressed by the ryots quite often are: (1) Cost of gathering and transporting the trash out of the field; (2) lack of labour during the busy harvest season, and (3) lack of water to moisten the heaps when they are turned. It must be said that even in the face of these difficulties, the upkeep of the soil fertility by conserving its organic matter through the use of materials like the cane-trash compost is by far more important in the long run. By composting trash from one acre, it is possible to add over two tons of organic matter, and about 60 lb. of nitrogen to the soil. The compost thus also serves to enrich the nitrogen status of the soil, which is so badly needed in our State.

The Sugarcane Development staff have been doing intensive propaganda in educating the ryots on the value and methods of composting trash. This practice is becoming popular particularly in factory areas, where trash is not at all required for boiling the juice. In the year 1949–50, 500 tons of compost were prepared from cane-trash, and in 1950–51, 4,822 tons were prepared. The Agricultural Department also offers one rupee per ton of compost as subsidy.

Here is what a cane-grower of the South Arcot District has to say about compost from trash—" I own 20 acres of cane, and the trash that remains after the labourers take (for roofing) is intensively composted in 10 to 12 pits.

Composting is done with trash, cattle dung, and green matter. The cost of digging a pit (20′×15′×3′) is Rs. 12 and cost of removal of compost works up to Rs. 40. I nearly got 50 cartloads every year by this method. The effect of using the compost is seen in the improved retention of moisture and yield. The soil owes its fertility entirely to the compost I have applied."

CHANGE OF ADDRESS

The Office of the Women's Welfare Officer is now shifted from the Government House to the following address:

' Door No. 7, Dhanala Aravamudha Naidu Garden Street, Egmore P.O., Madras-8.

Satyamangalam Agricultural Station

The Government have sanctioned the continuance of the Agricultural Research Station at Satyamangalam in the Lower Bhavani Project area and also the staff connected with it for a period of one year from August 7, 1952.

Oil Engine and Electric Motor Pumpsets

Owing to adverse seasonal conditions in the districts of Chittoor, Cuddapah, Chingleput and North Arcot and in certain portions of Anantapur, Kurnool, Nellore and Coimbatore Districts, it has been decided to purchase and supply 240 oil engine and 50 electric motor pumpsets under hire-purchase system at a total cost of about Rs. 12 lakhs as part of the measures to relieve the distress in those areas. The Government have authorised the Joint Director of Agriculture to distribute the oil engine and electric motor pumpsets to the applicants as detailed below :—

1. In accordance with the order of priority within each district in the case of entirely affected districts by adverse seasonal conditions ; and

2. In accordance with the order of priority within the areas affected by adverse seasonal conditions in each district in the case of partly affected districts, a single priority list for all the affected areas in each district being maintained for this purpose.

District.	*Number of Oil Engine pumpsets.*	*Number of Electric Motor pumpsets.*
Chittoor	70	16
Cuddapah	40	1
North Arcot	50	15
Chingleput	30	18
Anantapur	10	1
Kurnool	15	..
Nellore	10	..
Coimbatore	15	..
Total ..	240	51

Oil Engines under Hire Purchase System

The Government have directed that the collection of instalments due in Fasli 1361 towards the cost of oil engine and electric motor pumpsets, supplied to the ryots under the hire purchase system in the areas affected by adverse seasonal conditions, be postponed by one instalment period, i.e., one year, without any additional interest being charged for the period of postponement. The remaining instalments will also be postponed by one year without any interest for the postponed period.

Oil Engines in Power Cut Areas

In places where the cut in the supply of electric power operates the Government have ordered that permission and licence may be granted by local bodies and their executive authorities to the owners of factories, workshops and work places, for the installation and working of oil engines, provided that the factories, etc. are situated in non-residential areas.

Bulldozer for Deepening Well

The Government have ordered the supply, as a special case, of a bulldozer to the Managing Trustes of the Narasaraopet Town Water-supply Improvement Scheme Trust on hire, for deepening the 'pedda' tank, so as to relieve the present acute water scarcity in Narasaraopet town.

Mohwa Hand Decorticator : Last Date Extended

The Indian Central Oil Seeds Committee has notified that the last date for receipt of entries for the best model of Mohwa Hand Decorticator, for which a prize of Rs. 2,000 has been announced, has been extended from April 30, 1952, to 31st August 1952, by which date full particulars regarding the design, performances, etc., of the Decorticator should be received by the Secretary, Indian Central Oil Seeds Committee, Room No. 345, Block No. 9, Shahjahan Road, New Delhi-2.

Intensive Cultivation Schemes

It has been decided by the State Government to continue all existing Grow More Food Schemes in this State during 1952–53 also in accordance with the Five-Year Agricultural Plan. As it is necessary that all Intensive Cultivation Schemes which were in operation in 1951–52 should continue to be executed even after 31st March 1952 without break, all Collectors and Heads of Departments have been permitted to proceed with the execution of all the Intensive Cultivation Schemes (including works, supply and miscellaneous schemes) which were undertaken by the State Government in 1951–52 in pursuance of the drive for self-sufficiency in food.

Progress of work under Intensive Cultivation Schemes during February 1952.

1. *Irrigation Schemes.*—A total of 471 wells under the Scheme for sinking of new wells and repair to old wells, 48 tanks under construction of new tanks and repairs to old tanks and four irrigation tube wells were completed.

2. *Land Improvement Schemes.*—5,500 acres were improved under clearance and reclamation of waste lands.

3. *Distribution of Fertilisers.*—4,195 tons of ammonium sulphate and 127 tons of other chemical fertilisers were distributed.

4. *Distribution of manures.*—6,519 tons of rural compost, 8,878 tons of urban compost and 92 tons of green manure seeds were distributed.

5. *Distribution of improved seeds.*—562 tons of paddy seeds and 24 tons of other seeds were distributed.

Vanamahotsava 1950 : Presentation of Silver Shield

The Executive Committee for Tree Planting has decided to arrange a suitable function at Madras for the presentation of the State Silver Shield, for the best district in Madras and Coorg for the year 1950–51, to South Kanara. An exhibition of articles, connected with National Tree Planting Scheme, is proposed to be arranged on this occasion.

More Fish to Meet Food Deficit

By Sri K. N. ANANTARAMAN, I.C.S., Director of Fisheries, Madras

"The development of our fisheries is now absolutely essential in connection, whether direct or indirect, with our food supply; when we despair of food independent of climate for a rapidly increasing population, of industries for non-agriculturists, of manure for deteriorating soils, we may thank God that we have got yet our fisheries to develop."

This was written 50 years ago in 1899 in Bulletin No. 1 of the Madras Fisheries. Even now after the lapse of 50 years the statement is more or less correct.

The State has probably the biggest and the oldest Fisheries Department in the country, thanks to the untiring efforts of Sir Frederick Nicholson. The State has got a coastline of 1,700 miles. The surrounding seas teem with valuable fish. Sardine, Mackerel, Soles, Caranx and Seer are some of the most abundant species. The State has also many tanks, lakes and rivers abounding in fish. The fisheries in huge reservoirs like the Mettur Reservoir, Hope Lake, Periyar Lake, Veeranam Reservoir can be developed intensively to supply fish to the surrounding districts. Brackish water lakes, like the Pulicat and Collair lakes, also afford room for development. Faced with deficit in agricultural food production, the Japanese have looked over their rigidly restricted mountainous islands to the ocean for balancing their country's food budget. Madras with its large fish eating population can meet the food deficit in the same way by intensive exploitation of the Marine Fisheries and by the development and exploitation of the Inland Fisheries.

Backward Group

The Fisheries industry is practically in the hands of about five lakhs of fishermen scattered in isolated hamlets along the long coastline. A few of the inland fishermen have other subsidiary occupations. They belong to different communities. Most of the fishermen are illiterate and economically very backward. There are a number of middlemen who advance loans to the fishermen during the slack season. They take the catches from the fishermen at prices fixed by themselves. The capital invested in the fish trade is comparatively very small. The fisherman is in perpetual economic bondage to the middlemen. The only practical method to remedy this state of affairs is to make the fisherman himself fully realise the difficulties and later remedy them by co-operative methods.

The eradication of illiteracy was one of the steps taken by the Government in this direction. Most of the fishing villages are scattered in isolated places on the coast, miles away from other villages. Schools had therefore to be started in the fishing villages. Considerable attention was also paid to subjects like boat building, elementary navigation, natural history of the important food fishes and net making, etc. It is the aim of the Government to make them adopt modern methods in catching, preserving and marketing the fish. There are at present 60 elementary schools, ten higher elementary schools and one high school. There are 10,000 boys and 5,000 girls in these schools. The annual expenditure on these schools is Rs. 3½ lakhs.

Fostering the Co-operative Movement

The Fisheries Department has also been devoting great attention to the fostering of the Co-operative movement among fishermen with a view to free them from the grip of the middlemen. Loans are issued to members to clear off the prior debts and for buying boats and nets. Co-operative societies also run provision stores and ration shops. Some of the co-operative societies have taken on hire vans from the Government to take the catches of the individual members to the markets. Many of the co-operative societies run yarn depots for supply of yarn to the members for the making of nets.

At present there are about 350 co-operative societies with a membership of over 50,000 and a share capital of Rs. 5 lakhs. In many of the societies, officers of the Fisheries Department serve as Honorary Secretaries, maintaining all the accounts.

Stocking of Inland Waters

One of the important schemes sanctioned by the Government is for the intensive stocking of inland waters with quick-growing species of fish. We have got nearly 8½ lakhs of acres of inland waters, of lakes, tanks and reservoirs. An acre of water, if properly stocked with fingerlings or fish seed, will yield after eight months 1,000 to 1,500 lb. of food fish. The advantages of developing inland fisheries, though fairly known to most of us, are still worth mentioning. Fish can be had in the interior districts whenever we want it. Fish is a commodity that gets easily spoiled. It is therefore desirable to produce fish as close to the places of consumption as possible. The problem of 'glut' does not arise in the case of inland fisheries as we can take out whatever quantities we want. In marine fisheries, fish come in shoals and very often arrangements for the distribution break down, resulting in glut in the local markets. In such cases lot of the fish is no doubt cured. But still in the case of marine fish, we do not have any control over the rate of supply.

The Department has been conducting an elaborate investigation on the suitability of every tank for pisciculture. The area of the waterspread, the duration of water during the year, the present fauna of the tank, the P.H. of the water are all recorded.

Though there are many varieties of edible fish, the most important species suitable for stocking inland waters are only few in number. They are chiefly the carps like Catla, Labeo and Cirrhina and a few estuarine species like Etroplus and Chanos or the Milk fish. Most of the carps breed profusely in the rivers and in traps in paddy fields. Even 500 of these fingerlings will not weigh a pound. If stocked and protected the same number of fingerlings would yield 500 lb. of good fish.

Destruction Halted

By constant propaganda and enforcement of the Fisheries Act, this thoughtless destruction of the potential wealth of the country has been stopped to a considerable extent. The fingerlings swim down to the channels and congregate in large numbers whenever the sluice gates of regulators

are slightly opened, as all fish have a tendency to swim against the current. These fingerlings are gathered by the subordinates of the Fisheries Department in large numbers at such centres, sent by motor vans in tin carriers to central nurseries and from there by train to the stocking tanks. The tanks are cleared of predaceous fish, fish which live on other fish, like the carnivora of forests, and then the stocking is done. Great care is needed in handling the fingerlings at every stage as they are extremely delicate. The water in the tin carriers in which they are being transported to stocking places, has got to be changed regularly and the temperature kept down.

Government have sanctioned a scheme to stock 500,000 acres with five crores of fingerlings. Some of the demonstration tanks yielded as much as 2,500 lb. of fish per acre. The Dykes Pond at Visakhapatnam, the Mariamman Gundam at Kurnool and the Vellore Fort Moat, which are all maintained by the Department, have yielded good results. About ten lakhs of fingerlings were introduced in the Kadamba tank at Tirunelveli District.

In some places, private persons have taken up pisciculture. In East Godavari District, Peddapuram Taluk, one prominent ryot has stocked a 100-acre tank with fingerlings taken from the Department. The growth of fish has been quite good and he is getting offers of Rupees 30,000 to Rs. 40,000 a year for the fish. A scheme for intensively exploiting the Mettur Reservoir has been sanctioned. About 6,000 lb. of fish are taken out every day. Considerable attention is also paid to the replenishing of the stock. The rich fisheries of the Veeranna Reservoir in South Arcot District are also exploited by over 500 licensees. This reservoir has been stocked intensively by the Department.

Scheme for Providing Quick Transport

Most of the fishing villages are situated on the sea coast far away from metalled roads. There are not adequate facilities for taking the catches in time to the markets. Fish is a commodity which is subject to rapid spoilage. The principal causes of fish spoilage are by bacterial action and autolysis. Under ideal growth conditions bacteria multiply about once in every 20 minutes. At that rate a single bacterium will multiply into 68,000,000,000 (sixty-eight thousand millions) in 12 hours. Ideal conditions such as high temperature exist in our country. Autolysis is the self-digestion of the fish by enzymatic action.

The quantity of fish lost by spoilage can be roughly estimated at about one-third of the total landings. Even after the fish are brought to the roadside, there are no arrangements to take the fish speedily to the markets. In this race between the bacteria which decompose the fish, and man who is eager to take it as food in the best condition, every minute counts. Government have sanctioned the purchase of fourteen motor vans for conveying fish from the fishing hamlets to markets in cities and towns.

Mechanising Indigenous Craft

Though the State has 1,700 miles of coastline and though our seas teem with valuable species of fish, our fishermen are able to take out only a fraction of the valuable wealth. Though they are not lacking either in industry or in ingenuity, they are able to exploit only a narrow fringe of the sea close to the shore with the help of the dugouts, the dhonies and the catamarans. Considerable amount of energy is expended in reaching the fishing grounds. As the fisherman has to depend either on the wind or on his own efforts to return, he is not able to devote much time and energy to actual fishing. The only remedy is to mechanise the indigenous craft or to devise such craft that are within the purchasing capacity of the ordinary fishermen. The Special Officer, Craft and Tackle, of the Fisheries Department, has designed a boat 24 feet in length costing Rs. 3,000 and fitted with an engine costing an extra Rs. 3,000 which is thoroughly seaworthy and economical to maintain. The engine is run on diesel oil. The boat is capable of a speed of eight knots an hour. The running expenses are about six pies a mile.

COROMANDEL FISHERS : *A typical catamaran of the Madras Coast, with the crew of three ready for the day's work. Towring by motor vessels gives these fishermen greater facilities for deep-sea fishing.*

It is hoped that well-to-do fishermen and fishermen's co-operative societies could adapt these mechanised boats, and extend the zone of operation and the quantity of catches.

Supply of Yarn, Sailcloth and Catamarans

While the prices of provisions and cost of boats and tackle have gone up, there is not much corresponding rise in the price of fish that the fishermen gets. Most of the rise in the price is appropriated by the middlemen. In order to help the fishermen, Government have sanctioned a scheme for supplying yarn for repairing their nets, sail-cloth, the craft and timber for their catamaran at 75 per cent of the cost price. About Rs. 8 lakhs worth of yarn have been distributed to the fishermen at 75 per cent of the cost price. The timely and adequate supply of yarn has gone a long way in helping the fisherman to pursue his occupation successfully.

Salt at Subsidised Rates

Though the total quantity of fish landed is not adequate, if properly distributed to all the fish eating sections of the population, yet during seasons of glut fisheries, considerable quantities of fish could not be conveyed in a fresh condition to the interior and sold. This is due chiefly to the want of an adequate supply of ice, facilities for refrigeration and quick transport. In the absence of these facilities, the next best course is to cure the fish by salting it. Salt is very cheap but a very efficient preservative. In the West Coast the Fisheries Department is maintaining a large number of fish curing yards where the curing is done under the supervision of experienced officers of the Department. Only good fish is admitted into the yard, pure salt is supplied at concessional rates in adequate quantities and the finished product is let out only after inspection.

When duty on salt was being collected, salt at concessional rates was supplied to the fishermen to induce fishermen to bring their fish to the yards instead of allowing them to cure it with impure salt under unhygienic conditions. After the removal of the salt duty the concession was suspended. But it was found that the curer resorted to impure salt and cured it outside the yard. Cured fish is the only source of cheap protein for the poorer classes in the interior districts. The cured fish which was produced

(*Continued on page* 24)

Food Offences and Punishments Awarded

During the fortnight ending February 29, 1952, 611 cases of prosecution against food offences were disposed of in the Madras State, except in the district of Guntur. The accused persons in these cases were people of all classes. Fines ranging from Re. 0–8–0 to Rs. 300 and sentences of imprisonment up to six months were imposed.

Kaliyaperumal of Tanjore District was fined Rs. 200 for illicit transport of rice. For attempt to transport rice without a permit from West Godavari District to East Godavari District, B. Ayyanna of Razole and Ch. Lakshmi Reddi of Arthamur were each sentenced to imprisonment till the rising of the Court and fined Rs. 200 or five months' simple imprisonment. A fine of Rs. 300 was imposed on P. Ahmed Thuvur, cultivator, Ernad Taluk, Malabar, for failure to sell surplus paddy. M. Subbayya of Krishna District, a dealer in foodgrains, was awarded rigorous imprisonment for six months, for non-maintenance of accounts.

During the same fortnight, other departmental punishments such as warnings, fines, forfeiture or enhancement of security deposits, suspension or cancellation of retail and wholesale licences, etc., were also awarded to persons who were dealing in foodgrains in 247 cases.

During the fortnight ending March 15, 1952, 464 cases of prosecutions against food offences were disposed of in the Madras State, except in the districts of Chittoor and Nellore. The accused persons in these cases were people of different social standing. Fines ranging from Re. 1 to Rs. 500 and sentences of imprisonment up to six weeks were imposed.

K. Venkatakrishnaiah, cultivator, Korimerla of Krishna District, was fined Rs. 500 and Ponnu-swami Nadar, Palanivel, Ramasubramania Pillai and Sappania Pillai of Tiruchirappalli District were each fined Rs. 200 for failure to surrender surplus paddy to Government.

A. Basaviah, N. Ragaviah, and Pyaperu of Guntur District were each fined Rs. 200 or rigorous imprisonment for three months, for running a mill without licence, hulling paddy without permits and non-maintenance of accounts. In the same district, Dronadula Reddi Periareddy, cultivator, Marikapudi, was fined Rs. 200 or three months' rigorous imprisonment for being in possession of 42 maunds and 10 seers of rice without a licence. In East Godavari S. Subbarao and two others were fined Rs. 500 or three months' rigorous imprisonment respectively for unauthorised possession of foodgrains. For unauthorised transport of foodgrains, G. Neekaraju of the same district was fined Rs. 200.

During the same fortnight, other departmental punishments such as warnings, fines, forfeiture or enhancement of security deposits, suspension or cancellation of retail and wholesale licences, etc., were also awarded to persons who were dealing in foodgrains in 192 cases.

Aid to Deep-Sea Fishing

Madras State has a long coastline, and the fishing resources off the coast are well-nigh inexhaustible. However, the sea fishers of Madras both on the Coromandel and West Coasts, using the traditional catamaran, are unable to exploit fully the bounty of the deep waters, for reasons of practical limitations. The catamarans cannot go too far out into the sea ; the time and energy expended in reaching the usual fishing grounds preclude the men from exploring fresh spots ; while the deep-sea teems with fish wealth, the sea fishers are unable to reach the farther ground due to lack of time and energy.

The Fisheries Department of the Government of Madras has tackled this problem and with a view to providing the fishing folk with full facilities for deep-sea fishing, has worked out a scheme to overcome the existing handicaps. The Fisheries Department has stationed three motor fishing vessels (M.F.V.) at Madras for conducting exploratory and experimental deep-sea fishing operations off the Madras coast. The vessels tow the catamarans to distant fields, collect the day's catches and bring back the catamarans, thus saving time and energy.

Details of Vessels

The details of the vessels are as follows :—

1. M.F.V. *Vizianagar* : Sixty feet long, 20 feet beam fitted with 88 B.H.P. Kelvin diesel engine, with a speed of eight knots ; a crew of six, spacious deck for operating all kinds of tackle, insulated boxes to stow the catches.

2. M.F.V. *Madras* : Fifty-five feet length, 14 feet beam, fitted with a 60 B.H.P. Atlantic diesel with a speed of eight knots, and a crew of six.

3. M.F.L. 3 (Motor lugger) : Twenty feet length, 7 H.P. Victor diesel with a speed of six knots. Built by the Department.

The former two vessels are working under the deep-sea fishing scheme of the Madras Government, in experimental deep-sea fishing, on the following lines :—

1. To popularise these vessels for deep-sea fishing with indigenous gear.

2. Survey and marketing of rich fishing grounds in the deep seas.

3. Aiding fishermen to reach the distant grounds by towing number of indigenous craft.

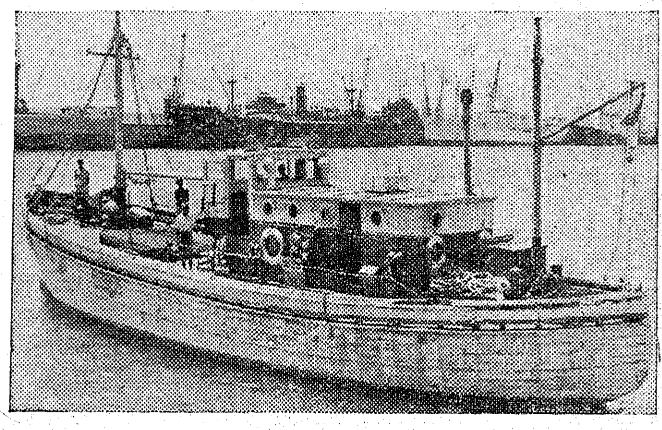
4. For the collection of scientific data.

The lugger functions under the Intensive Cultivation Scheme to popularise and develop indigenous craft and tackle.

The Deep-Sea Fishing Operations are directly under the charge of an Inspector and Sub-Inspector of Fisheries at Madras. Both have had special training in deep-sea fishing techniques.

Daily Routine

The fishing vessels leave Madras Harbour daily early in the morning, towing a number of catamarans to the new fishing grounds. Each vessel can tow eight catamarans with three fishermen in each, though three to five catamarans is the normal complement. Some of the fishing grounds which have recently been surveyed have never been visited by the local fishermen in the course of ordinary fishing. The catamarans thus reach fishing grounds lying in varying depths between 13 to 60 fathoms, about 15 to 30 miles off the shore.



POWER VESSEL : One of the motor fishing vessels of the Madras Fisheries Department. Such motor boats are instrumental in exploiting sources untouched so far.

The catamarans then disperse themselves to vantage positions and start fishing with line and net. Fishing hours are thus doubled and the strain of sailing to and fro completely removed by the power boat towing scheme. The daily catches, which range from 1,000 to 1,200 lb. are collected in the fishing vessel and speedily brought to the shore. By evening 5 p.m. the fleet returns to the Harbour, loaded with the day's yield, which is directly rushed to the Corporation cold storage ; from here supplies are taken to the markets and Government fish stalls.

Catching Sharks

The Fisheries Department has special devices for catching sharks off the Madras Coast. One of the power vessels is concentrating on shark fishing with special tackle and expert fishermen. A number of baited shark fishing hooks in different sets are released in the various grounds and kept overnight. The next morning the lines are hauled in, with a number of sharks hooked to them. The sharks are stowed on board, the lines baited again and released again in different grounds.

As soon as the sharks are l nded on the vessel, they are washed and cut, the flesh, liver and fins being separated. The flesh is cured under the most hygienic conditions and supplied to towns in the interior. The livers are sent for shark liver oil extraction ; the fins are dried and exported to Eastern countries.

The fisherman engaged in deep-sea fishing operations are quite happy and consider themselves far above the other fishing folk. Besides substantial monthly wages, the fishermen also get a lucrative share in the daily catches. The Fisheries Department looks after their needs in supplying suitable craft, yarn for making lines and nets, and special hooks for fishing. The daily catches are marketed by the Fisheries Department.

Chemistry for the People's Good

"The purpose of this Laboratory is to advance Knowledge and to apply Chemical Science for the Good of the People."

This is the legend that attracts every visitor to the National Chemical Laboratory of India, in Poona. It is prominently displayed from the ceiling of the cream and light grey entrance hall. A motto, however, is one thing; what is infinitely more important is whether and, if so, how, it is being observed.

With a peculiar charm of line, design and colour and in a setting of lawns, fountains and low hills, the Laboratory covers an area of 475 acres. It may not at first sight give the impression that anything so remote from the artistic as the conversion of bones and hides into gelatine, or tobacco waste into an insecticide, or the microbiological production of sulphur goes on within; but one has only to visit the first and second storeys to meet men—some eminent in their respective departments of learning—and not a few women too, working purposefully in a maze of test tubes, retorts, decanters and glass bottles—not to mention furnaces and infra-red rays!

Test Tube to Pilot Plant

Seated in his glass panelled office room, Prof. James W. McBain, F.R.S., scholarly but humane, said: "We carry on work from the test tube stage of the university to the pilot plant stage. We cannot afford to make convenient guessess, because our problems are fundamental to industry." Clearly with a zeal to make his Institute of real service to Indian industry and, if the final analysis, to the country at large, he added: "The touchstone of our success is what happens outside the Laboratory—in industries which have sought and obtained our advice on their problems." The N.C.L., he continued, had always in mind the need for turning chemical and industrial indigenous materials to good account. Some of these now thrown away in large quantities as mere waste, are basic to many a project upon which work is in hand, and to that extent there is promise of saving on imports.

A visit to the Laboratory, a matter of four to five hours if one wants to gain some insight into the work, technical aspects apart—readily shows the emphasis that is being placed on its function of bridging the gulf between science and its application to the practical problems of human welfare. At the same time, fundamental research, considered necessary for maintaining "the vitality of the institution", goes on; and there is much scope for the specialised staff to delve into the mysteries of various chemical processes.

Broadly, the N.C.L.'s scientific work—carried out in no less than about 300 rooms, each a laboratory in itself, falls into seven major divisions—Biochemistry, Organic Chemistry, Inorganic Chemistry, High Polymers, Chemical Engineering, Physical Chemistry, Survey and Information.

Engineering Hall

Comparisons are always odious, but a layman seeks the expert's indulgence for being more than ordinarily intrigued by the Chemical Engineering Division, to which each project is finally sent for development on a pilot plant scale and for the working out of the economies involved.

Equipped with machinery for various chemical processes, the Engineering Hall of this division is replete with crushers, grinders, distillation apparatuses and vacuum and steam-jacketed pans. Here one finds experiments on the production of certain phosphatic fertilizers not yet manufactured in India. Phosphate from Tiruchirappalli, in the South, is basic to this process. A plant is being assembled both for the production of phosphorus from this phosphate and subsequently for the processing of the phosphorus into a fertilizer known as Triple Super-Phosphate. The experiments aim at determining conditions for commercial manufacture.

CHEMISTRY FOR THE PEOPLE'S GOOD: At the National Chemical Laboratory of India, Poona. A view of one of the laboratories of the Organic Chemistry Division.

Insecticide from Waste

Another important project for which a fairly elaborate apparatus has been erected pertains to the extraction of nicotine sulphate from nothing more valuable and rare than tobacco waste. The grading, manufacture and preparation for export of 684 million lb. of the Indian tobacco crop produce over 100 million lb. of midribs, stocks, dust and scrap. It is believed that in the Guntur District alone the scrap amounts to five million lb. Some of the scrap is used in the manufacture of snuff, but considerable quantities—regarded as just so much waste—await economic utilization. The N.C.L.'s process for the extraction of nicotine aims at the production of an effective insecticide from this cheap waste material. This insecticide has already been sprayed from the air in certain parts of the country in the fight against the locust.

The Division is also setting up a pilot plant for the preparation of cellulose pulp from indigenous raw materials such as bamboo, reeds, grasses and certain varieties of wood. The object is to use this pulp in the manufacture of rayon, plastics, certain types of paper and photographic film. At the moment, our cellulose pulp is imported from Sweden, the U.S.A. and Canada, especially in the form of newsprint.

Alcohol is being employed as the starting point of a basic organic chemical industry. First, it is sought to produce ethylene; and, later on, clycol, styrene and other chemicals, hardly any of which are produced in India in spite of the fact that we have large quantities of cheap alcohol, 20 million gallons of which are produced annually as a by-product of the sugar industry.

A process that bids fair to become the basis of a cottage industry is the aqueous extraction of castor seeds. The seeds are roasted and ground to a meal, which is then boiled in water with the addition of small quantities of salt, lime and potassium nitrate. Castor, one of the best known lubricants apart from its medicinal value, is released and removed, and the oil obtained is about 90 per cent of that originally in the seeds. One advantage of this process is that it does not call for the use of any elaborate machinery.

Sulphur from "Digested" Sewage

A recent achievement of the Biochemistry Division is the production of citric acid—used largely in pharmaceutical preparations, food industries, ink manufacture and dyeing and calico printing—and calcium gluconate by the fermenting action of fungi on sugarcane and glucose. Developed in the laboratory with a view to commercial exploitation, the process has been made over to a Bombay firm which is being advised in the setting up of a bench pilot plant. Citric acid is now being imported from the U.S.A.

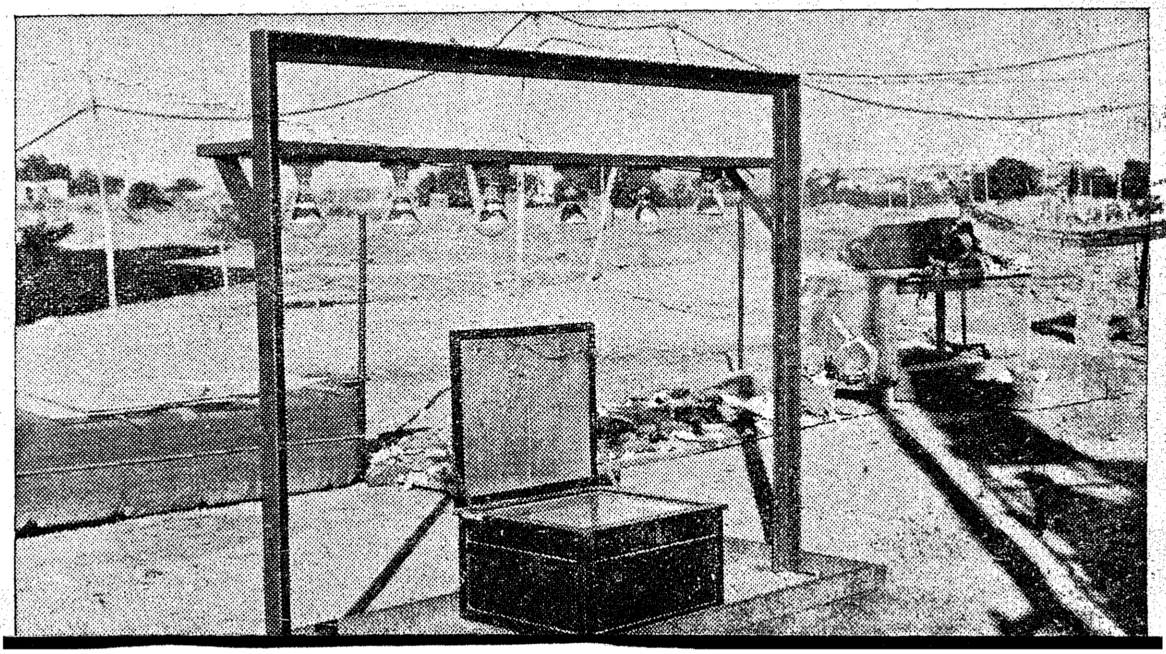
Another promising line relates to the production of sulphur—in short supply in most countries—by micro-organisms. "Digested" sewage, as produced in the sewage purification works at Dadar, near Bombay, is an essential of this process.

The Biochemistry Division has since last year become the custodian of the national collection of type cultures. This collection, which was begun at the Indian Institute of Science, Bangalore, in 1940 under the C.S.I.R. was transferred to the N.C.L. in April, 1951. The primary object is to collect, preserve and disseminate free of cost pure culture of bacteria, fungi, yeasts and other micro-organisms important to industry and research. The collection has at present 700 cultures in its repository.

Sugar and Boot Polish

Sugar is not generally associated with boot polish, but the Organic Chemistry Division, in which no less than 30 projects are in hand, sees a very definite connexion between the two. A by-product of the sugar industry is a black,

SOLAR ENERGY: Artificial Sun (heat produced by use of infra-red bulbs). Here a cooker is being tested. Sunshine is a commodity which is in plentiful supply in India. The harnessing of this rich source of energy for practical purposes is receiving attention at the National Physical Laboratory, New Delhi. Solar energy can be used for generating power by the use of a heat engine or through a thermo-electric generator. It can also be used as heat for air-conditioning, refrigeration and similar purposes. In the National Physical Laboratory an air engine is working on sunshine and air alone. Appliances to use solar energy for cooking food and heating water are also being devised.



solid sticky " wax ", not of much use in its original state, we are assured by the experts, because it does not possess properties of " solvent-retention " and " take-up ". The process evolved at the N.C.L. is for bleaching the wax and chemically modifying it. This modified wax approaches in chemical properties carnauba wax, which is imported and for which no substitute has so far been found in India. Results obtained with the N.C.L. wax in the preparation of boot polish, carbon paper, floor polish and lubricants are distinctly promising.

Wrinkle Finishes

By a process of which the Laboratory is justly proud and which it has had patented in India, the U.K. and the U.S.A. oil from Kamla seeds (found in U.P., Punjab, Bihar, Assam, Bengal and to some extent in Bombay between heights of 3,000 and 4,000 feet) is used in the preparation of varnishes and paints which, on drying in air at ordinary temperature, yield artistic " wrinkle " finishes, hitherto obtainable only by " baking " films of alkaloid varnishes. This method results in beautiful decorative finishes—but not without utilitarian value too—in doors, walls, furniture, typewriters, fabrics, paper and other materials that cannot ordinarily be subjected to baking.

It takes only two or three minutes after the Kamla oil has been spread on the glass, wood, metal or other surface for the film—subjected to air-drying—to set into wrinkles of various patterns and the required colour. Wrinkle finishes give better " grip " than plain finishes, besides rendering the material scratch-proof.

Ion Exchange

In chemical operations, few jobs call for so much effort and precision as that of separating the substances one wants from those one does not. Whether the substance is, on the one hand of the rarity of streptomycin or a radio-active isotope, or on the other ordinary sugar or water, the purification is not always easy. In the last few years, there has been discovered an excellent way of doing this—a process called Ion Exchange. Ions are simply atoms, singly or in groups, that carry on electric charge, and ion exchange is the process of taking one species of ion out of a solution and putting a different one back in its place. At least—that is how it seems to the layman.

In the Plastics and Polymers Division, methods of making resins by the exchange of ions are in progress, use being made of such indigenous raw materials as coal, cashewnut shell liquid, sulphuric acid, agricultural waste and napthalene. The resultant resins can be used in the treatment of brackish waters, to make sea-water potable and to remove fluorides from water found in certain parts of the south, making it crinkable. Medicinal uses include the treatment of dropsy and a certain type of ulcer. Ion exchange also results in the recovery of sugar from fruit wastes and in the preparation of soft-curd milk for children.

In another experiment in this section use is made of Indian asbestos in the manufacture of battery containers, which have to be acid and electrical proof. An essential of the process, which aims at the curtailment of imports of battery containers, is the mixing of bitumen with the asbestos and other fillers. These experiments followed a reference by the Tariff Board to the N.C.L. in view of the restrictions placed on imports of Canadian and South African asbestos.

The Rats Lived

The common cashewnut, of which India is a big producer, yields from its shell a dark liquid which when applied to a tin or iron surface and baked at about 120° produces a shining film, resistant to water and ordinary organic solvents. An important investigations, it has as its objective the use of this composition for the lining of food and oil containers. Rats have been given to eat food packed in containers lined with this composition—with no ill-effects.

At present, cashewnut liquid is being exported to the U.S.A. where it is used in the preparation of coating compositions and various plastics.

Another set of experiments in the Organic Chemistry Section in which use is sought to be made of the natural resources of the country, relates to the purification and removal of objectionable odour from neem oil, rendering it suitable for use in high-grade soaps, and even for edible purposes. The purified oil yields, on hydrogenation, good quality stearin. It can also be used in the preparation of vanaspati. Thus neem may replace groundnut oil to a substantial extent in the manufacture of soaps and other industrial products, making groundnut more readily available for edible purposes.

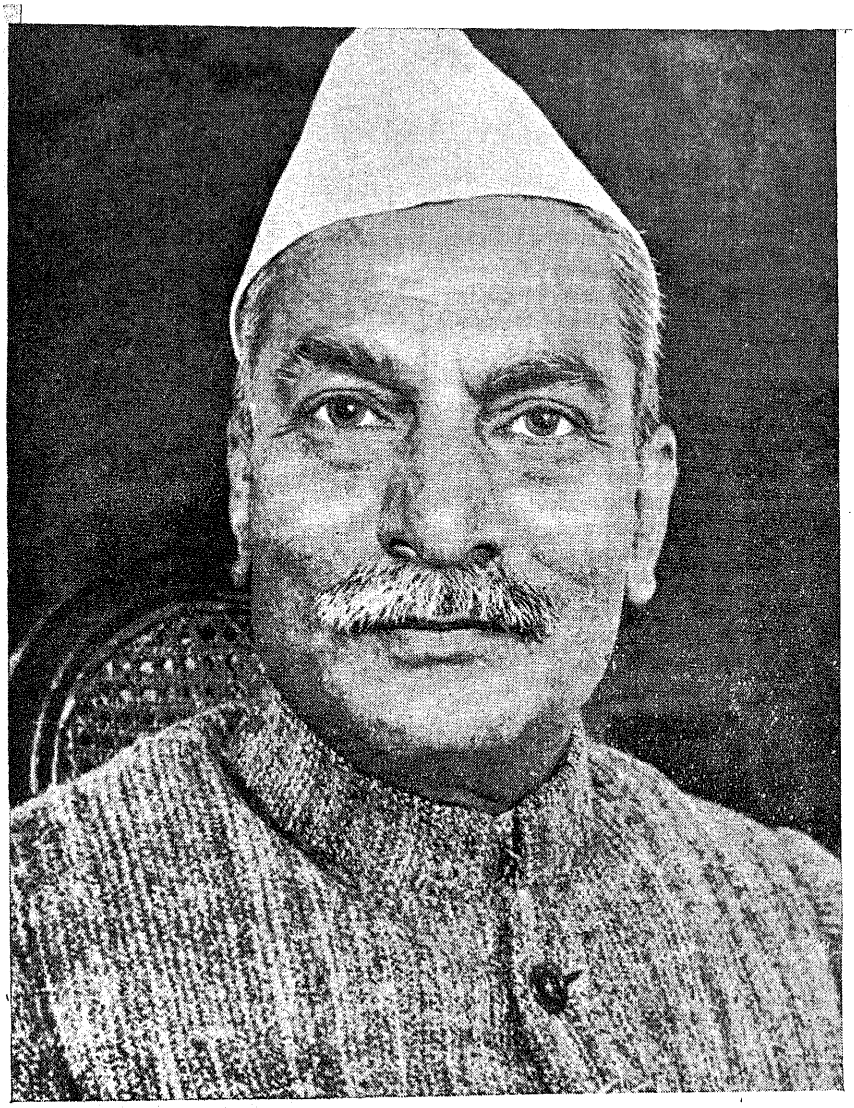
Advice to Displaced Persons

One of the most interesting features of the institution is the Industrial Laboratory; and an invaluable service rendered by this section is the information, advice and aid it gives to would-be small investors to study—and in many cases set up—industrial projects with limited capital (Rs. 5,000 to a lakh is generally the range). Care is taken to eliminate as far as possible the use of heavy and costly machinery. Demonstrations are arranged for the benefit of those who want to be advised on practical methods in the manufacture of various chemicals, on starting new industries or on the use of substitutes for materials needful but difficult to import.

Ranging from fountain-pen ink to soya bean plastics and soya bean milk, nearly two score projects—all small scale—have been or are being studied, each arranged neatly on a table with its relevant charts and graphs, chemical equipment and raw materials. The school-boy will find there a cheap process for the manufacture of slates and lead pencils, and for the housewife there are experiments on dyes and camphor making and the preparation of solid disinfectants. Mirrors should be of general interest, while the industrialist will revel in experiments for the use of gypsum powder in white paints and preparation of silicon tetrachloride, not to mention the utilisation of nitre cake and the treatment of effluent water.

Built and equipped at a cost of Rs. 75 lakhs, the N.C.L. boasts of a collection of scientific instruments, in many respects unique in Asia. These include special X-ray plant, infra-red spectrometer, ultra centrifuge and electron miscroscope.

Cut off from Poona proper by a distance of about five miles, the Laboratory has built up a community life. There is a flourishing sports club, a well-equipped auditorium, a cafeteria run on non-profit basis, co-operative stores and colony centre, a dramatic club, a kindergarten, besides a dairy, vegetable and fruit gardens.



THE PRESIDENT : Dr. Rajendra Prasad, Preside
of the Republic of India.

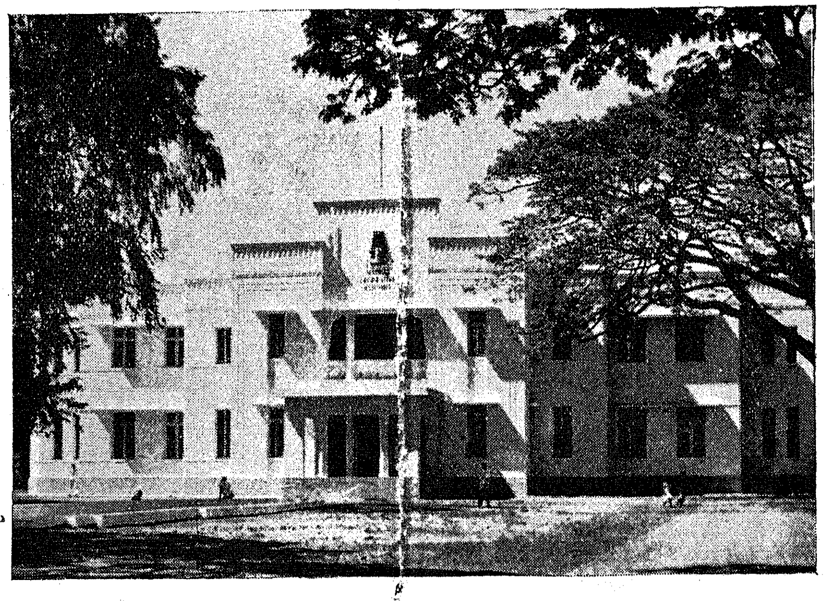
PUBLIC LIBRARY
8 JUN 1952

THE VICE-PRESIDENT : Dr. Sarvapalli Radhakrishnan,
Vice-President of the Republic of India.

THE NEW ASSEMBLY BUILDINGS

H.E. Shri Sri Prakasa, Governor of Madras recently opened the new buildings of the Madras State Assembly. Constructed and furnished at a cost of about Rs. 10·5 lakhs, the new buildings can accommodate all the 375 Members elected under the new Constitution.

Above : H.E. the Governor cuts the ribbon to mark the opening.



Right : The new buildings.

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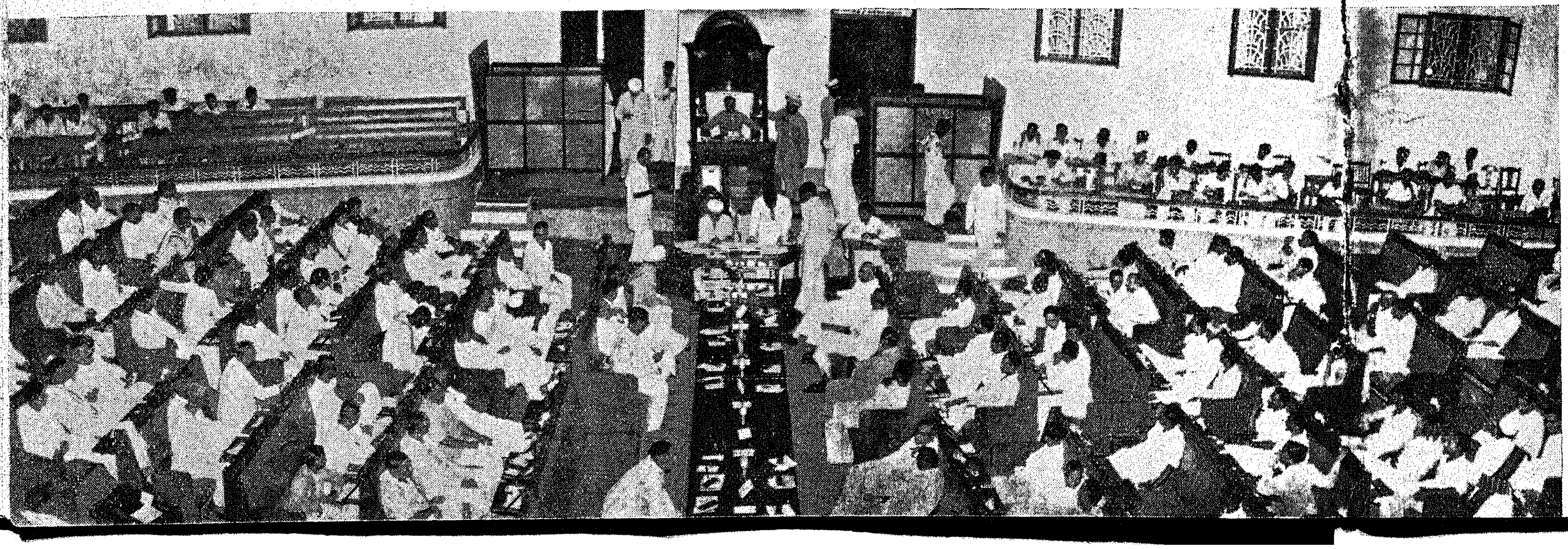
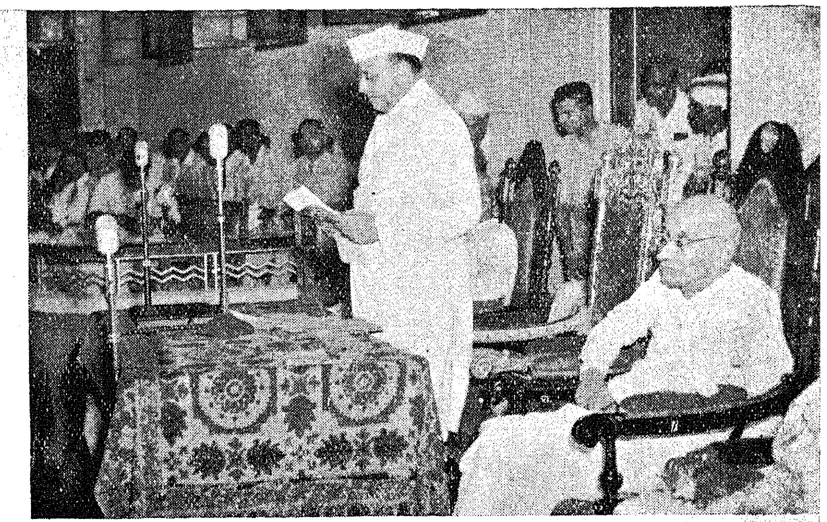
Below : A view of the Assembly hall, showing a session in progress.





H.E. the Governor speaking at the opening ceremony.

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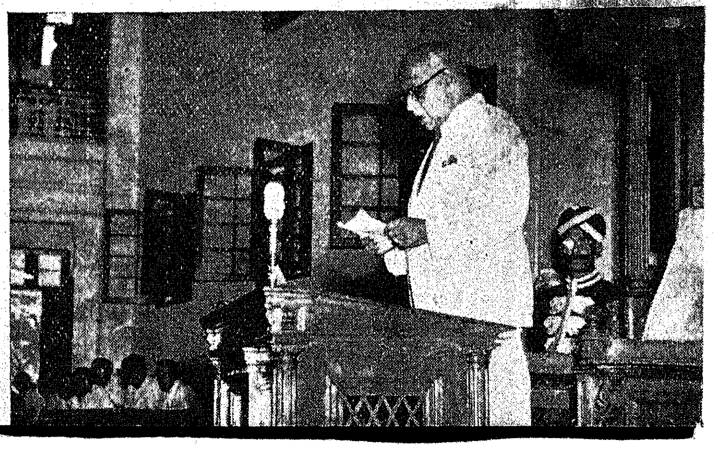
Above : His Excellency with Hon. Sri J. Sivashanmukha Pillai (Speaker) on his right and Hon. Dr. P. V. Cheri (Chairman of the Council) on his left.

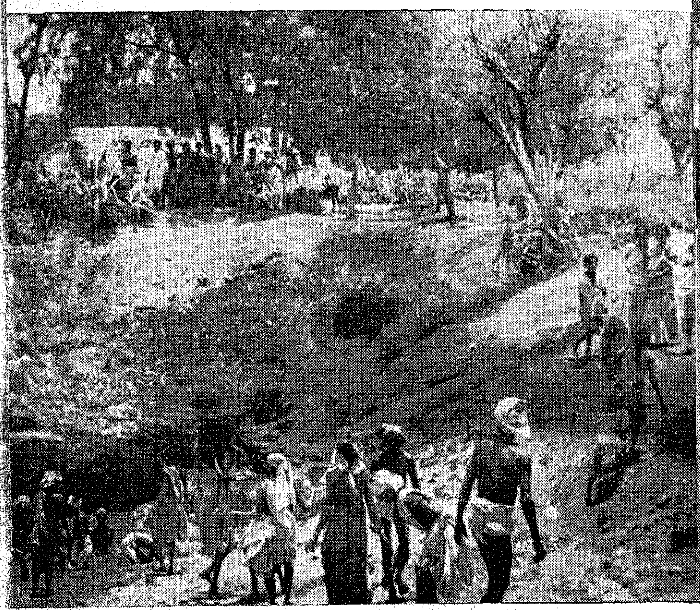
Right : Sri P. T. Rajan as temporary Speaker, conducted the proceedings of swearing-in of Members and election of Speaker.

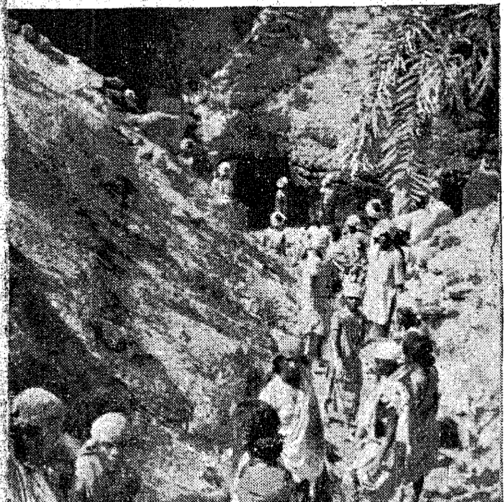


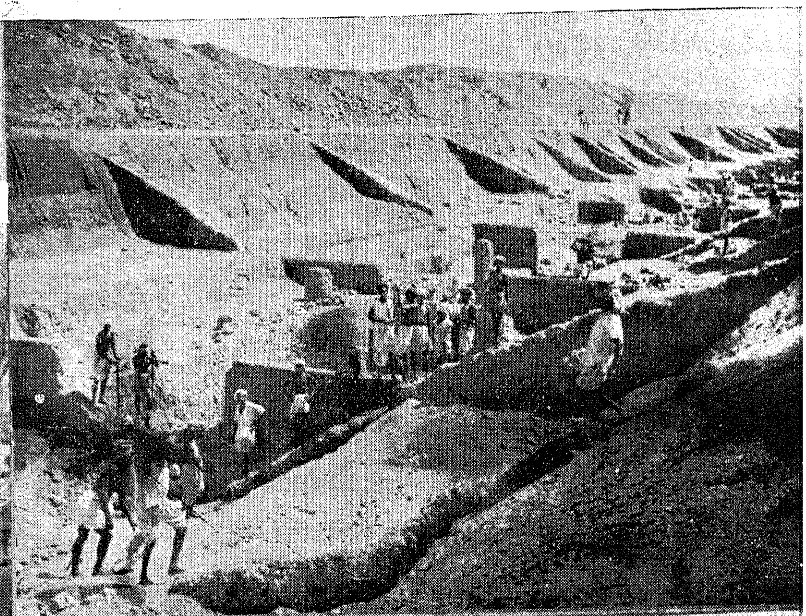
RAYALASEEMA : (*Left top*)—H.E. the Governor distributes saris to women at Kalikiri (Chittoor District) ; (*Centre*)—Jobs are provided for unemployed ryots. Here work of silt clearing of an open well in Pamur (Nellore District) is being done ; (*Bottom*)—A well in Kanigiri (Nellore District) is being deepened.

Right top : Construction work on the supply channel to the Hajipuram Tank in Nellore District, proceeds apace.

SALEM : (*Right centre* and *bottom*)—Two views of the Poyyapatti gruel centre in Salem District.







RELIEF MEASURES IN SCARCITY AREAS

Animal Welfare in Britain

By UNA LASCOT

The people of Britain are deeply interested in the welfare of animals, not only because they like them as pets, but because the country is famous for breeding horses, cattle and dogs. For this reason both the Government and private societies have always paid much attention to the task of raising the standard of animal health and to find out more about every kind of domestic animal.

In 1942 a new organisation was formed, called the Animal Health Trust, paid for by the gifts and membership subscriptions of people in all parts of Britain who love animals. The chief aims of the Trust are to help young men and women who wish to become veterinary surgeons, to study the prevention and cure of animal diseases, to give advice and eventually, when funds become available, to provide an animal hospital service.

The Trust has already done fine work for the dumb and patient creatures which not only work for man and provide him with food, but give him faithful companionship. In spite of limited funds and lack of accommodation and equipment, four different Research Stations have already been set up in Britain where staffs of experts study animal diseases and make important records about the breeding and care of animals. Lectures and demonstrations are given and promising veterinary students are awarded scholarships.

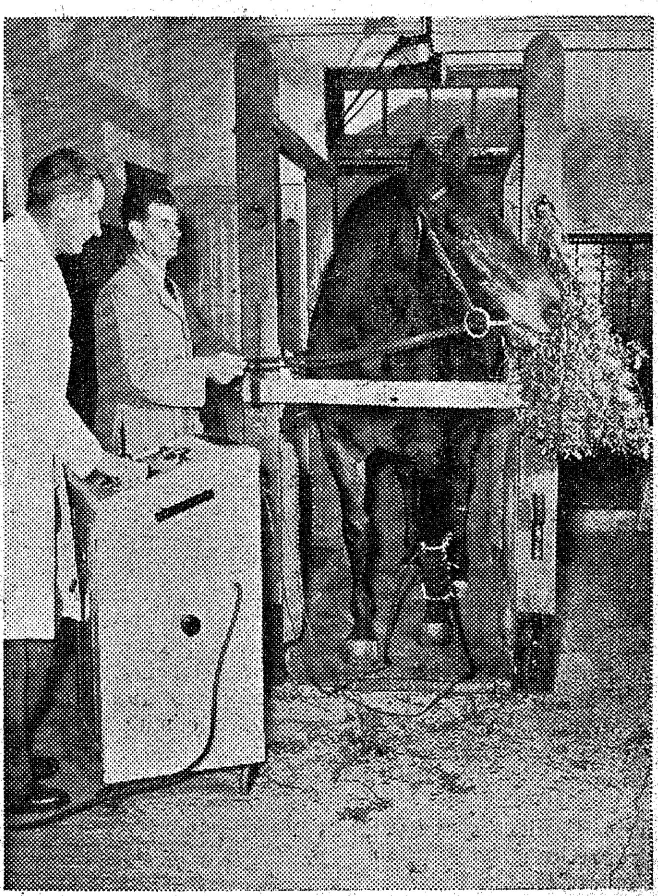
Study of Horses

At Balaton Lodge, Newmarket (Suffolk), is the Equine Research Station. The work done there has supplied valuable knowledge about the correct methods for breeding and rearing healthy horses and the best food for them, and how to prevent and treat certain horse diseases. At the field station there are spacious paddocks for ponies, a house containing flats for some of the staff and their families, and a library and lecture rooms.

Scientific workers, horse owners and breeders, students—all are welcome to visit Balaton Lodge and to see the work that is going on there. Many visitors assist the Station by telling the research workers about their own stables and problems.

In 1949 the Canine Research Station was opened at Kennett, near Newmarket, for the study of dogs. There the laboratory, X-ray room, record office, hospital ward and a low-temperature store for dog food are housed in temporary sheds and huts until the Trust is able to build larger and more permanent premises. Three tons of whale meat can be stored in the cold room for at least 12 months—a great benefit during the summer months—and two other huts have been converted into kennels with outside runs. In this modest collection of building the staff of the Research Station has made steady progress in the study of dog illnesses.

Further good work is being done at Houghton Grange, in Huntingdonshire, where are the Research Stations for poultry and farm animals. The number of dairy cattle, pigs, farm horses and poultry kept on the Trust farms increases each year, and many acres of land have been sown with wheat, barley, oats and vegetables—not only to enable the research workers to study different types of soil and crops, but to provide foodstuffs and bedding straw



ELECTRO-THERAPY IN ACTION: This brown mare in the stocks is receiving deep-heat treatment for a sprained tendon on her near fore leg. The surgeon (left) *is operating the controls of the Inductotherm while the patient loses no time in acquiring an extra ration of her favourite delicacy, lucerne, which has been placed in the net* (right) *for that very purpose.*

for the livestock of all four Research Stations, so helping to reduce costs. Other departments deal with milk and egg production, and the rearing of healthy breeds of chickens and cows. One cowshed has been converted into an isolation hospital for studying infectious animal diseases.

Youth Members

As membership increases, the Animal Health Trust is able to gradually widen the scope of its work and carry out its splendid aims more fully. Many boys and girls in Britain give their help by becoming Youth Members (under 18 years of age) or Minor Members (under 14), and this entitles them to receive advice from the Trust about the management of their pets—and even the pets themselves can do their bit by being enrolled as members of the "Army of Trusty Animals".

Naturally, all the valuable work being done by this organization costs a great deal of money, but it is money well used in helping to reduce the loss of millions of pounds per year to Britain through animal diseases.

(*B.I.S.*)

The Problem of Rinderpest

A farmer who has owned cattle knows what Rinderpest is and means. A sharp fever, small ulcer on the lips, gums, muscle and tongue looking like bran-like deposits, later foul smelling projectile diarrhoea and prostration. He knows the cattle are in the grip of death and the pest is on its march. It means utter ruination for him. The best animals of his herd are to pass away. Once the animal is taken ill, the disease must run its course. No medicine is of any avail.

Mortality from Rinderpest in the Madras State is usually over 50 per cent of the animals attacked. But sometimes as much as 80 per cent may be lost. Certain strains of cattle are more susceptible than others. For instance, European cattle, hill cattle, crossbred cattle and Indian buffaloes are usually many times more susceptible than the Indian plains cattle. But even among plains cattle, the disease assumes high virulence when it has not been noticed among them for several years.

Nature of the Virus

To have an intelligent appreciation of the problem of Rinderpest in the State, it is necessary to understand the nature of the infective agent. The Rinderpest virus is a minute living entity. It is very fragile and does not live outside the animal body for more than two days. It cannot multiply in the soil and requires an actual living animal for it to survive. If the animal dies, the virus perishes with it within a couple of days. It the animal recovers, the virus is again totally eliminated within a few days of such recovery and the recovered animal is then immune. The only way by which the virus could exist is by finding close contact with successive susceptible animals without interruption. In a population containing proportionately large numbers of immune animals, this chain of transmission is interrupted and the virus is lost.

With this background of the nature of the virus, let us examine the history of the disease in this State for the last 50 years. There was a heavy mortality from Rinderpest in the years 1907–1909. During the 12 months April 1908 to March 1909 alone, there was a mortality of about 1½ lakhs of cattle. There was about as much mortality again near about 1918, and in 1928, there was a mortality of about one and a quarter lakh per year. It is customary in the study of epizootology to trace the course of the disease as represented by their incidence and mortality, by means of a graph. When the figures for the past 50 years are thus plotted, it is found that the crest of highest incidence of mortality occurred periodically at intervals of about ten years. During these crests the disease assumed high proportion occurring here, there, everywhere. During the intervening period between the crests, the mortality goes down and outbreaks occur at odd places and at longer intervals.

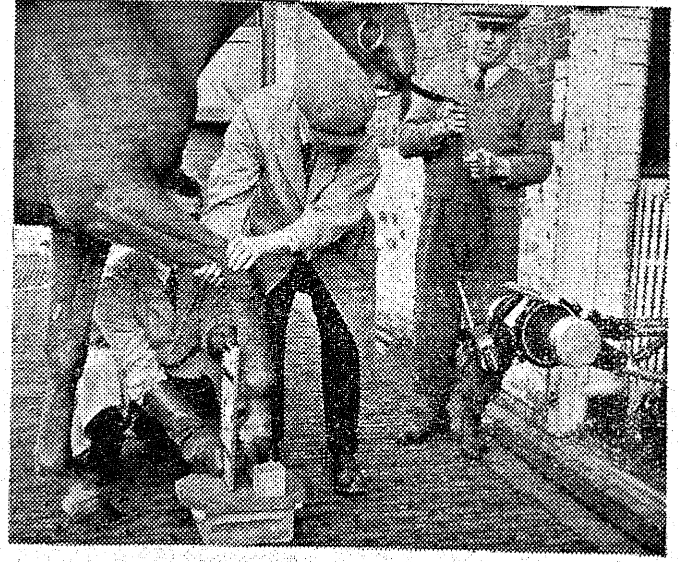
Immunisation

Let us look into this periodic increase and decrease in mortality rate. In any outbreak, for every animal that dies, there are many others that suffer little or apparently remain unaffected. This is because he susceptibility of individuals in a population is not always uniform. There are some which are highly susceptible—others which are partially resistant and again others which are almost totally resistant. The very susceptible animal usually dies, but the other animals either get a mild attack from which they recover or an attack which is almost imperceptible. That is, some animals may just be off-form for a day or two but nothing more. But the animals which recover from the attack of Rinderpest whether severe, mild or imperceptible are rendered solidly immune for their life.

It follows that the survivors of a severe epizootic of Rinderpest are mostly composed of immune cattle. These immune animals interrupt the chain of spread. This explains why after a bad epizootic of Rinderpest, there is a lull period of some years when the disease cannot show itself in its severer form. But the calves which are born to these immune cattle will, however, be susceptible to Rinderpest.

When three successive generations of susceptible calves are born, which usually takes about nine years, the new arrivals usually form over 60 per cent o the total population and the field is now set to attract another wave of Rinderpest. So periodicity is kept on.

If we can reproduce artificially what obtains after a natural outbreak, we should be able to effectively control the disease. Scientists have been working for over 60 years to modify the Rinderpest virus so that it would produce a mild disease and render the animal immune. But it was not until 1928 when a relatively safe vaccine was made available. Just as vaccine reaped from the calf is safe for immunisation against Smallpox in man, Rinderpest virus adapted for the goat was found to be relatively more safe for use as a vaccine among cattle, although some cattle require a small flat dose of protective serum to control the severity of the disease. Soon after this discovery.



X-RAY PHOTO: An X-ray photograph is taken of a horse's foot suspected of being affected with navicular disease. The X-ray set is the latest type for animal work and the only one of its kind in the U.K. It can be adjusted to take an X-ray of any part of a horse or pony and can be moved for use in the operating room, stocks or stableyard. Some photographs can be obtained with an exposure as rapid as 1-100th of a second.

Towards Better Cattle

With a view to develop cattle breeding on an intensive scale in rural areas, the Indian Council of Agricultural Research is financing a scheme, the non-recurring and 75 per cent of the recurring expenditure on which will be met by them. Twenty-five per cent of the recurring expenditure has to be borne by the private institutions.

Six institutions found in the approved list of the Indian Council of Agricultural Research have come forward to take advantage of this scheme. Pure breed bulls will be located in these centres and this will be supplemented with artificial insemination of cattle. The non-recurring expenditure on these six centres comes to Rs. 55,800 and recurring expenditure every year will be nearly Rs. 75,000.

the Madras Government opened a Serum Institute for the production of large quantities of vaccines and sera for intensive field vaccination.

Intensive Vaccination

We know from the experimental study of epizootology under laboratory conditions and of field observations of a population subject to vaccination that if 40 per cent of animals are rendered immune, the disease no longer occurs in the form of widespread epidemics but occurs only as odd outbreaks at long intervals. If over 60 per cent are immunised, the disease tends to disappear altogether. That is why after a bad outbreak of Rinderpest when the survivors of immune animals make up more than 60 per cent of the population, the disease disappears from the locality.

Intensive vaccination was, therefore, resorted to and the result of this campaign is reflected in the lower incidence of the disease during the subsequent peak years. Compared to a mortality of 1½ lakhs in 1908 and 1918 and 1¼ lakh in 1928, the mortality during the peak year 1943–44 was only about 40,000. What is more, on account of further intensive vaccinations at the scenes of outbreaks and of penta inoculations of cattle migrating to forest grazing areas, we have now succeeded in completely eradicating the disease from 15 contiguous southern districts of the State. The magnitude of this achievement will be realised when it is recalled that Rinderpest was not allowed to raise its ugly head for a continuous period of four or five years over a whole territory of over a lakh of square miles, whereas in no year previous to this period had any district been free from the visitation of this disease for even a year. The credit for this achievement goes primarily to the farmer, for prompt reporting to enable immediate application of control methods is vital for the arrest and eradication of Rinderpest.

Rinderpest is dreaded because of the heavy mortality that it inflicts, but it can be readily controlled if one has the determination to do it. It is not very contagious unlike Smallpox and Foot and Mouth disease in animals. A mere partition is sufficient to prevent spread from infected to healthy animals. One of two things could be done to keep off the disease: (1) Immunise a large proportion of cattle by mass immunisation, i.e., over 60 per cent so that the herd immunity could be raised to a level when infection even if introduced cannot establish itself. This is a colossal job which requires enormous resources of men, money, organisation and laboratory equipment. (2) Alternately, the disease could be nipped in the bud if the simple precaution is taken to confine all the animals—visibly infected or apparently healthy—to their sheds in a village when the disease has its first appearance, until all the animals in and around the village are vaccinated. In conjunction with this, all fairs and shows which facilitate congregation of animals should be banned in the neighbourhood. The enforcement of these standstill orders and "pocket" immunisation if relentlessly practised will suffice to abort the epizootic.

Danger of Contagion

Though we have no Rinderpest in the southern peninsula of the State, we cannot remain complacent over this achievement. The northern districts of our State bordering upon other States such as Bombay, Hyderabad, and Orissa still remain infected. There is a heavy pressure of contagion on the southern districts from these northern districts. We are endeavouring to keep off the disease by interposing an immune belt by regular vaccination of large numbers of cattle along the other inter-jacent taluks. But sometimes, there is a danger of Rinderpest being carried across the immune belt when animals are transported by train or boat. Rinderpest was thus introduced last year into the City of Madras from cattle imported from Guntur District and it spread to the adjoining districts of Nellore and Chingleput and it put a severe test on the efficiency of our organisation to stamp out the disease from these areas through intensive pocket mmunisation.

The eradication of Rinderpest in the northern districts bordering upon other States is beset with difficulties because of certain complicating features. These districts are grossly deficient in cattle. There is a large annual import of cattle from the neighbouring States for work purposes. There is also an annual exodus of cattle from these districts to forests on the bordering territory for grazing purposes. There is thus a large intermingling of cattle between these districts and the neighbouring States. There is thus a constant heavy pressure of contagion. The only effective way of checking Rinderpest in these districts is to have vaccination camps at all trade routes and fairs. There are some limitations for such vaccinations. After vaccination with the present goat virus, animals require a short period of rest, otherwise they may react severely. If rest camps are to be provided for cattle along the trade routes and fairs, the cost will increase enormously. Fortunately, however, a milder rabbit adopted vaccine is now at hand. After vaccination with this milder product, animals can be allowed to move on as if nothing had been done to them. This vaccine is now under field test and will soon be available.

Control Measures

If the conditions for the survival of the virus are so precarious, then one may ask why at all should this virus be allowed to exist and be the dread that it is. The answer

is the ignorance of the common man of the real weaknesses of this poor virus, lack until recently of a safe and cheap vaccine for mass immunisation and thirdly want of organization and personnel. With the safe vaccines which have been recently evolved and with the knowledge that we possess, there is no right for this disease to stalk the world if only we have the requisite organization. Whereas Asia has been devast ted by this disease, Europe has remained free for over 70 years, although the susceptibility of European cattle are many times greater than Asian cattle. Only once, soon after the Second World War, the disease was introduced into Belgium through some Indian cattle jettisoned at Antwerp en route to Brazil. But the disease was rapidly eradicated by the simple precaution of the destruction of the affected animals and enforcement of standstill orders.

But in a country where the disease has established itself and made its home, it is necessary to starve it out of existence by the application of pocket belt or mass immunisation as the case demands. We have been able to eradicate the disease from the southern penisula by intensive pocket immunisation. But while the disease exists in any part of this great country, there is a risk of the disease being introduced here also. The Government of India have wisely decided to tackle this eradication work on a country-wide scale under the ten-year programme of land transformation, by mass immunisation of all susceptible animals. But this is not likely to materialise for another two or three years.

In the meantime, you can facilitate the disease being kept under control by—

(1) prompt reporting of outbreaks as soon as cases appear n the village ;

(2) isolat on of the attacked animal in owners' own premises ;

(3) voluntarily ke ping all animals in their yards in affected villages until the Veterinary Doctor advises otherwise ;

(4) insisting on prompt vaccination of all animals in and around the affected village ;

(5) getting animals vaccinated before taking them to cattle fairs and shows ; and

(6) vaccinating all animals newly purchased.

(*By Courtesy, A.I.R., Madras*)

Equine Research

By HELEN DUNT

Unknown to the spectators who cheer on their favourite runners in some future Grand National, the winner may well be, if research just begun proves successful, a horse which has recovered from a broken leg and has a metal plate, with screws, immobilising the fractured bone.

Experimental work on this possibility has recently begun at the Equine Research Station of the Animal Health Trust, where the most urgent of the numerous and varied problems which confront breeders and trainers from the first moment of a foal's birth are under investigation.

In the house, stables and grounds of Balaton Lodge, which were placed at the disposal of the Trust by the late Lady Yule and Miss Gladys Yule, and in Lanwades Park near by, veterinary scientists and their assistants are at work. They aim to increase equine fertility, to throw more light on the various diseases of foals and adult horses, and to develop a practical system of control of those worms (notable "redworm") which can and do seriously affect the health of the horse, particularly young stock.

In the Surgical Department, operations are performed at the request of practising veterinary surgeons, and speci l attention is being p id to the application of electro-therapy to horses and to the use of metal plates and screws in the repair of fractures.

Voluntary Effort.

This Equine Research Station is one of four research establishments set up by the Animal Health Trust, which is an independent organization, founded in 1942 under the Scientific Directorship and Chairmanship of Dr. W. R. Wooldridge, M.SC., M.R.C.V.S., F.R.I.C. Mr. J. Arthur Rank has recently become Chairman of the newly appointed Executive Committee. The aims of the Trust are to mobilise the enthusiasm and efforts of all who care for animal health in order to relieve animal suffering, reduce the cost of animal production and maintenance and to remedy the shortage of trained veterinary and assistant personnel by the awarding of fellowships, grants and scholarships to graduate and post-graduate students, for specialist study both in the United Kingdom and overseas. (*B.I.S.*)

More Fish to Meet Food Deficit—*Continued from page* 16.

outside the yards was inferior in quality and had also the tendency to decompose rapidly, resulting in loss of valuable food. Government have therefore introduced the supply of salt at subsidised rates at Rs. 1–4–0 a maund, just at about 50 per cent of the cost price. This resulted in a great increase of the quantity of fish cured in the yards. Nearly 80,000 maunds of fish are thus saved from spoilage and made available for consumption to the poor people in the interior.

Ice-cum-Quick Freezing Plants.

The Department is also setting up two ice-cum-quick freezing plants in the West Coast. These plants have a capacity to produce four tons of ice per day and to keep in cold storage 70 tons of fish. Lots of fish, which otherwise would be lost by spoilage or converted into manure, can be kept safely in cold storage and sent to cities gradually when there is demand.

All the schemes for development of the fisheries of the State also improve side by side the economic status of the fishermen. The development of the inland fisheries will greatly improve their income since the fishermen charge one-third of the total value of the fish caught towards their fees. The saving of fish from spoilage by supply of salt at subsidised rates will also improve their economic position. The spread of education and the introduction of the Co-operative movement will also serve the same purpose.

The proper development of the fisheries in the country will depend chiefly on the improvement of the fishing communities, especially on the socio-economic side.

(*By Courtesy, A.I.R., Madras*)

Dr. Maria Montessori

By SRIMATHI RUKMINI DEVI, Theosophical Society, Adyar

The passing away of Dr. Maria Montessori has created in the world a very serious gap which can hardly be filled. I met her first in Holland in the year 1936. She had left Spain where Civil War had broken out and had settled down in Holland and founded a small school in Laren. Dr. Arundale and I called on her and were received by her with great warmth. She was dressed in black and looked so motherly and simple that we were struck by her personality. In those days she could only speak Italian and we were translated. She told us when we asked her to come to India that she had for years longed to come out; though many invited her no one had actually arranged it. She said she would gladly come if we arranged it. So this became one of our chief interests. It took some time to plan it all and get all the necessary support. Finally she came in 1939 when she conducted her first Montessori Course. Three hundred students came from all over India. The Besant Theosophical School was put at her disposal for experimental work and for making a model institution to demonstrate her ideas. From then on, India became Montessori conscious and teachers trained by her were in great demand.

Soon the war broke out and throughout she stayed with us both at Adyar and for some time at Kodaikanal. Being an Italian she was not allowed to move everywhere freely. Misfortune had dogged her in the past. She had to leave Italy because she would not co-operate with Mussolini in his ideas of educating the young for war. She went to Spain and built up her work there. Again, she had to leave Spain when that country became Fascist. She came to India in time to be saved from the World War. In 1947 she started a permanent Training Centre for teachers. She longed for this and was tired of short training courses.

Entered the Very Heart of Childhood

In the midst of so much unreality and unhappiness Dr. Montessori brought a ray of light which could illumine the darkness in which the whole world is enveloped. There are and have been many great people in the world, but one who has entered into the very heart of childhood is indeed a saviour. We all understand so little about ourselves and we do not know that what we are is due to what we have been. Had the childhood of every citizen been filled with happiness, a creative atmosphere and understanding, the world itself would have been much further moved from the idea of war. Dr. Montessori realised that the child is not the child, the child is the whole man; the complete past, present and future in a tender young body; and that within that young body is the seed of qualities of weakness, of capacities and of intelligence. It is she who has brought to us the knowledge of the understanding of the mischievous child. She discovered what is mischief. She discovered the nature of play and she understood the process of the child's growth. In the child she saw the grown-up man or woman and in him she saw the personification of civilization.

Her fearlessness and constructive energy made it possible for all educationists to realise that we have all been fundamentally wrong in thinking that the child is immature.

A GREAT TEACHER : Dr. Maria Montessori, who revolutionised the technique of teaching children.

Listen to what she herself says: "My idea of experimenting differs from this in two ways. First, because it refrains from inciting reactions depending on the will of the experimenter, and offers instead activity freely chosen by the subject; it follows that in this very choice there is manifested spontaneously the individual mental seeds. Second, because the stimuli, although they are means analogous to those of experimental psychology, have however as their object the stabilisation in the subject of reactions which are enduring, that is, which are capable of modifying his personality. Education cannot exist other than in a dynamic state, in a continuous transformation of the individual who is to be raised to a higher level; and this process must develop in accordance with the inner dictates of life. It is the creative forces which must develop and we must not make ourselves substitutes, in an arbitrary manner, for the divine work whic[illegible]s accomplished in every living being. Indeed, we can[illegible]e more than co-operators in educational work with c[illegible]on; we cannot, therefore, force the child to follow[illegible] promptings, but we must provide the means best adap[illegible]o help the child in his voluntary work."

New Way of Learning

[illegible]he brought to the world of education the knowledge [illegible]at even a child of two is mature within the circumstances

of his being, and intelligent. Only his is a different approach and he has different ways of learning. So she created a new way of learning which we call the Montessori System. The Montesseri way has spread round the world to such an extent that the word "Montessori" means the child and there are many who even do not realise that there was such a person as Dr. Montessori. They only think that the word is the name of a method. Even today, unfortunately, people think that Montessori Education is just a method. But if one is to understand Dr. Montessori one knows that it is not a method but a special light shining through a form of learning and the learning itself is as Nature made it possible for the child. She says: "Now let us imagine a mind filled with a mystic ardour which follows all the revelations of the little child's mind, in order that, with mingled feelings of respect and love, of sacred curiosity and of aspiration after the highest places in heaven, he may learn the way to his own perfecting, that he may carry his perfection into the beautiful work-room of a classroom peopled with little children."

The whole world must bow to her in homage and in gratitude, for she brought joy and happiness to every school and every classroom. If the children in numerous schools today go eagerly to classes, to learn mathematics or geography or any other subject with the least fear that to do so is an unconquerable task, it is entirely due to Dr. Montessori. She identified herself so much with the children that though she was 81 when she died, she was like a young girl in the virility and creative imagination of the mind. Temperamentally Dr. Montessori was very emotional with a powerful intellect. She once told me that her desire when she was young was to be an actress. She went so far as to join a dramatic school but she heard a voice within her own higher nature which said that her mission was different. Then she desired to follow the way of medicine. In those days it was very difficult for a woman to join a medical college. She often said very humourously that she was admitted by chance. She applied to become a pupil and signed herself "M. Montessori". She said that the authorities of the medical college did not even dream that a woman would apply and so accepted her as a student thinking that M. Montessori was a man. One can imagine the tremendous shock which her appearance at the College produced! She took her M.D. and was a most brilliant doctor; yet she said she was not sure whether her calling was not something else.

Revealing the Joy of Living

While practising as a doctor she was asked to take charge of some defective children. She tried to amuse these poor children by playing with them. She made things with her hands in order to find some way of teaching them, for they were not intelligent enough to learn in the old way with books. Then she discovered that this means of playing began to reveal something thrilling and found that in the new way these children learnt eagerly, enthusiastically and intelligently. She says: "Nothing in fact is so fascinating as to attend the mental awakening of these children who are enslaved by their own inferiority, and to witness this kind of liberation of the soul from extinction through spiritual poverty, to see them arise, reviving and opening up towards interests that give life to their intelligence, to witness the happiness that comes to them through every activity in which the hand becomes capable of achieving something. It is really man arising from death to the joy of living." Thus her work began.

Dr. Montessori was emotionally sensitive and sympathetic. She felt for the children of the world and her heart went out to them in the miseries that they were suffering under their teachers and parents. It was in this sympathy that the Montessori system was born. She has been to India and has inspired hundreds of students. Many have benefited by her diplomas but to benefit truly one must imbibe that spirit of her artistic imagination, sensitiveness, childlikeness and profound sympathy. To her, the child was God and so her school was the temple and the diety of thetemple was the essence of childhood. Every educationist ought to understand this. We have lost a very great and a very wonderful person and the only thing we can do in remembrance of her is for every educationist to study her ideas and bring that blessing of happiness which she brought to every child in the home, in the school, in the country and the world.

(By Courtesy, A. I. R., Madras)

VISIT TO RAJ BHAVAN: A batch of about 30 students from the Andaman Islands, recently visited India on a month's tour. The students were invited to Raj Bhavan for breakfast with H.E. the Governor. Here they are seen with H.E. Shri Sri Prakasa and Srimathi Kamini Devi.

done in people to make various kinds of deposits. To inculcate the thrift habit, the rural societies supply hundi boxes to the members who put in whatever small savings they are able to make. The societies collect the amounts thus accumulated and credit them to the homesafe deposit account. These amounts are utilised by the villagers for occasions like Pongal, Deepavali, village festivals, etc. After the introduction of Prohibition the thrift campaign of the co-operatives was intensified.

The people are encouraged to save the money formerly spent on drink, although a part of it has to be spent to meet the increase in the cost of foodstuffs, cloth, etc. A sum of Rs. 21 lakhs was collected in this way during the last year. The amount may be small but the village societies are serving a very useful purpose by promoting the savings habit. Incidentally, these savings provide the village societies with the funds required for their business. Recently to mop up rural savings and to make them available to the village societies, a drive was instituted to collect rural savings in the countryside and a sum of Rs. 1·06 crores was collected up to 31st December 1951. The village societies thus function not only as an instrument of credit but also as an instrument for savings in the countryside.

Aid to Village Industries

Co-operation also helps the small artisans in the village. Next to the agriculturists, the chief artisan is the weaver. The State is now covered with a network of weavers co-operative societies, which distribute yarn to the members and take back the finished goods for sale. They are assisted in this work by the Madras State Handloom Weavers Co-operative Society. Nearly two lakhs of looms are working in the societies and their production amounted to Rs. 715 lakhs during the year 1950–51. Co-operative societies have been formed for the benefit of other artisans also who suffer from want of capital and a steady market for their goods. Societies have been organised for metal workers, leather goods manufacturers, coir workers, etc. These societies have been afforded assistance by Government by way of subsidy to meet the cost of equipment and to meet working expenses.

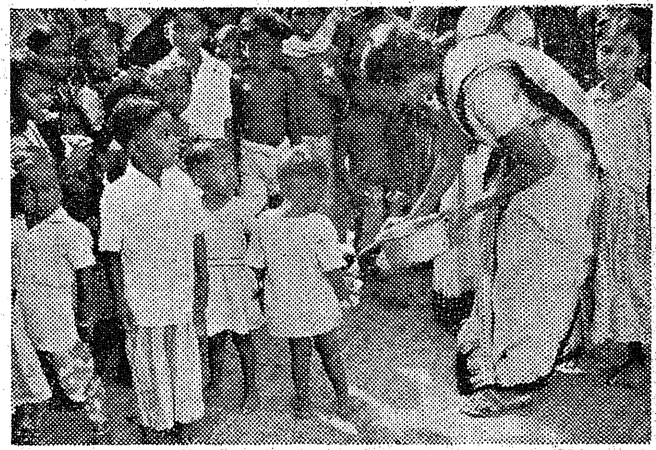
Another important village industry which is receiving attention is the palm gur industry. More than 2,000 societies for palm gur manufacture are in existence and they produced jaggery to the value of Rs. 137 lakhs during 1950–51. Training is given in the improved methods of jaggery production and free sets of equipment have been supplied to some of the tappers in the districts. Arrangements are also made to market the jaggery so that the producers may get a better return. They are also given loans by the village credit societies for the pursuit of their industry.

In the select firkas in the districts steps are being taken to distribute raw materials such as iron and steel, timber, etc., to the village artisans at cost price. Government have provided necessary funds for the purpose and also subsidy and staff to the co-operative agencies undertaking the work.

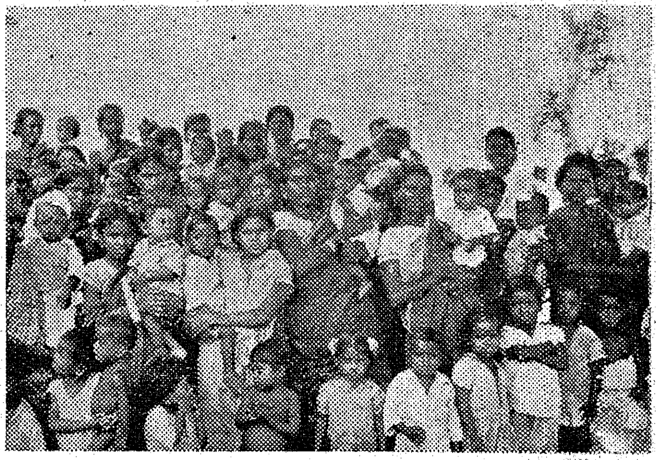
Health Co-operatives

An interesting experiment is being made in the formation of health co-operatives to improve the health of the villagers. A health co-operative society was started

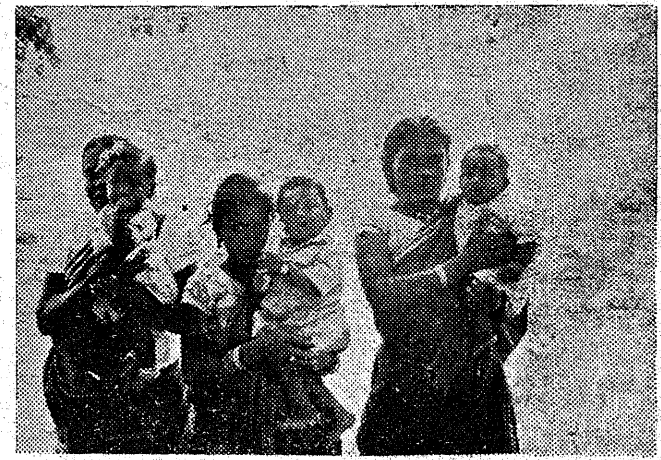
(*Continued on page* 36)



OIL-BATH DAY : Oil and soap-nut powder were distributed to all Harijans, especially children, during the Harijan Day Celebrations at Alampatti in Madurai District.



CANDIDATES : As part of the Rural Welfare activities, a baby competition was held to select the healthiest baby in the area. Picture shows the mothers with the "candidates".



PRIZE WINNERS : Adjudged the healthiest babies in the competition, these three fine looking infants were awarded the coveted prizes for health.

Multipurpose Co-operatives

Kudiraichandal

The Kudiraichandal Multipurpose Rural Credit Society E. 404 in Chinnasalem Development Centre in South Arcot District was registered on 12th September 1910 and started on its work on 5th October 1910. It serves four villages, viz., Kudiraichandal, Karanur, Nallathur and Envaipatnam with headquarters at Kudiraichandal. The present membership of the Society is 102 and the share capital of members is Rs. 498.

The maximum borrowing power of the Society is Rs. 6,000 and the individual maximum borrowing power of a member is Rs. 500. On 1st April 1952 loans due from members amounted to Rs. 3,276 as against Rs. 2,655 due on 1st April 1951. During the Co-operative year ending 30th June 1951 the Society borrowed Rs. 4,228 from the South Arcot Co-operative Central Bank and repaid Rs. 2,359. The Society has built up a decent reserve Fund and has invested a sum of Rs. 2,151 under Reserve Fund in the South Arcot Co-operative Central Bank. It has taken shares to the extent of amount of Rs. 567 in the South Arcot Co-operative Central Bank, Rs. 75 in the Kallakurichi Agricultural and Industrial Co-operative Society, and Rs. 25 in the South Arcot Co-operative Central Stores. The Society amended its bylaws for undertaking multipurpose, social and recreational activities.

The Society is dealing in chemical fertilisers, handloom cloth, iron and steel and domestic requirements like tamarind, varagu, salt, etc. The Society is supplying credit for purchase of articles of agricultural needs, supplying iron implements and manure for the farmers, handloom cloth for the daily wear and tamarind for the people of the village. Thrift scheme through hundi boxes has been introduced by the Society and the members are regularly saving in the hundi boxes.

During the year 1st April 1951 to 31st March 1952 the transactions in multipurpose activities are given below :—

Purchases.	RS.	A.	P.	*Sales.*	RS.	A.	P.
Textiles .. (Handloom).	180	0	0	Ammonia ..	185	0	0
Tamarind ..	21	0	0	Tamarind ..	36	10	0
Salt	20	0	0	Varagu ..	13	4	0
				Iron	28	3	0
				Textile ..	143	8	9
				Salt	7	2	0
Total ..	221	0	0		413	11	9

The society is subscribing for *Melichelvam*. Rural games are held at regular intervals under its auspices.

Hathibelagal

The village of Hathibelagal is at a distance of two miles from Alur, the Taluk headquarters in Bellary District. It is in Alur Selected Firka and is also within the panchayat board area of Alur with a population of 4,000 as per the last census. A multipurpose co-operative society was registered on 18th November 1950 and started on its work on 29th November 1950 for this village. As on date of starting, the Society has 20 members with paid-up share capital of Rs. 140. Now the Society has 34 members on its rolls with a paid-up share capital of Rs. 401. Fifty per cent of the population is represented and efforts are made to increase the number of members and share capital.

The Hospet Co-operative Central Bank sanctioned post-sanction of loans to the Society to the tune of Rs. 2,500 and a short-term loan of Rs. 500. Fifteen members were given loans for a total amount of Rs. 2,900. There are no overdues.

Fifteen members of the Society through 15 hundi boxes have saved Rs. 70 so far. It has done non-credit business by selling pencils, empty soap cases, knives, matches, etc., to an extent of Rs. 43–14–0.

The maximum credit limit of the Society is Rs. 15,000 and individual maximum credit limit is Rs. 500. The net assets by the 34 members comes to Rs. 2,11,848 as per property statement. Sri Prenashachar, the President, hopes to develop its business to greater extent in the co-operative year.

The address of the Society is Y. No.541, The Hathibelagal Multipurpose Co-operative Society, Alur Post, Alur Taluk, Bellary District.

Koderu

The Koderu Multipurpose Co-operative Credit Society in Nilgiris District was registered on 27th June 1934 and started on work on 23rd November 1934. It has 37 members with a paid-up share capital of Rs. 1,720. The maximum credit limit of the Society is Rs. 5,000.

On 30th June 1951, the Society owed a sum of Rs. 4,318 to the Central Bank. It has since repaid this amount and taken a fresh short-term loan of Rs. 4,850.

The individual credit limit of members is Rs. 400. On 30th June 1951 a sum of Rs. 5,959 was outstanding against the members. Out of this the Society has since collected Rs. 5,232, leaving a balance of Rs. 727 in six loans. This amount is overdue from 5th January 1952.

The Society earned a net profit of Rs. 100–13–0 during the year 1950–51. It has undertaken the collection of thrift deposits from members as a first step towards the introduction of multipurpose activities. The members have been supplied with hundi boxes and a sum of Rs. 265–8–9 has so far been collected in these boxes.

Ambulance Vans for Cuddapah

Sanction has been accorded for the diversion for the two ambulance vans from the mofussil hospitals to the famine affected areas of Rayachoti, Badvel and Rajampet Taluks of Cuddapah District, in order to render medical aid in these places.

Amenities to Hospitals

The Government have accepted with thanks the donations made by the Secretary, Rotary Club, Tirunelveli, and Srimathi Thangaswami, Member, Advisory Committee of the Government Women and Children Hospital, Vannarpet, Tirunelveli District, for providing amenities to the patients in the Government Women and Children Hospital, Vannarpet.

Benefits of Prohibition

The following instances reported from the districts give a graphic picture of the benefits of the Prohibition campaign.

Chingleput District

The enquiries conducted in the villages in Chingleput District reveal that Prohibition has done good to the villagers, especially to ex-addicts. The villagers are leading a happy life and there is definite decrease in the crimes generally committed by the villagers under the influence of liquor.

Guntur District

After the introduction of Prohibition it is seen that the economic conditions of ex-addicts have improved considerably and the money wasted on drink is being saved and is utilised for securing sufficient food, clothing and other necessities of healthy living, besides helping to clear off the debts incurred in pre-prohibition days. Some instances are given below:—

An ex-addict by name Kosuru Raghavulu of Hemelli village in Guntur Taluk used to spend all his earnings for his drinking habit in pre-Prohibition days. Now he has given up his drink and saved Rs. 500 and used that amount in improving his agriculture.

Another ex-addict by name Kerthi Lakshmiah, native of Tellapadu in Narasaraopet Taluk, used to spend all his earnings on drink. Now he has given up his drinking habit and thus was able to save Rs. 600. He opened a 'Killi shop' and now earns Rs. 70 per month.

Madurai District

1. K. Karuppannan—Pudupatty village, Nilakottai Taluk. A veritable drunkard, he saved a sum of Rs. 100 after the introduction of Prohibition, and has utilised his savings for the redemption of his old debts.

2. A. Anthony—Pudupatty village, Nilakottai Taluk. He was able to save a sum of Rs. 150 and thereby discharged his old debts.

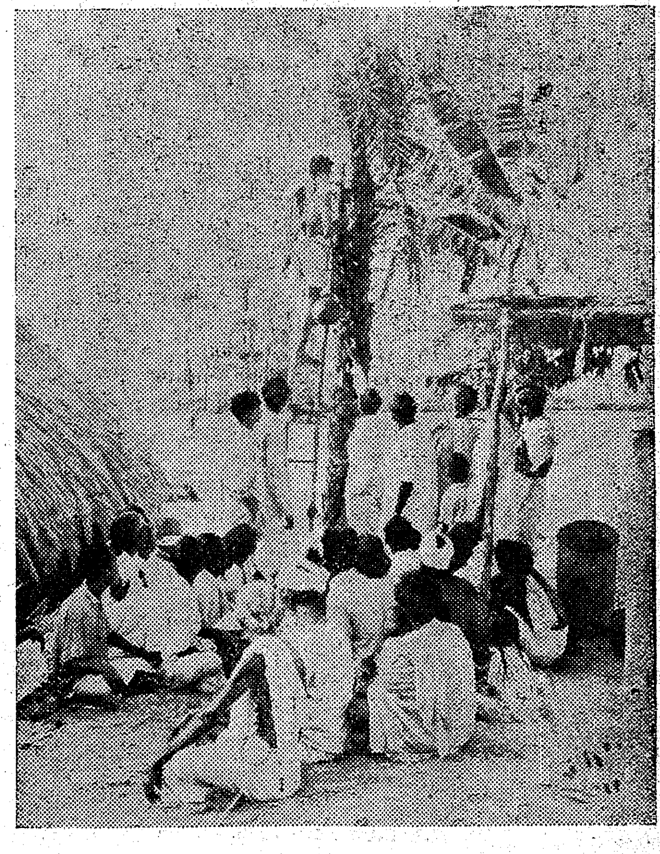
3. R. Mookan—Pudupatti village, Nilakottai Taluk. He was able to save a sum of Rs. 75. He purchased a bull from his savings for cultivation purposes.

Visakhapatnam District

In Visakhapatnam District Prohibition is working out good results to the ex-addicts. After the introduction of Prohibition, the ex-addicts equipped themselves with better clothing and renewed their household furniture with the aid of the savings which were previously spent on drink. Before the introduction of Prohibition, the ex-addicts were responsible for many a strife in their villages. Now they are peaceful villagers and members of the local Gramasangams and co-operative societies, especially in milk supply societies, contributing their mite to the uplift of the villages.

Tiruchirappalli District

Sample surveys of the economic conditions of typical ex-addict families before and after Prohibition were conducted in two villages of Alangudi Taluk in Tiruchirappalli were studied. The ex-addicts have saved Rs. 10 from their income every month regularly after Prohibition was introduced.



PALM GUR TRAINING : A course of instruction was imparted by the Palm Gur Instructor to the members of the Thimmanaidupalem Jaggery Manufacturing Co-operative Society in Chandragiri Taluk, Chittoor District.

The Nilgiris District

The ameliorative staff during their tours in the villages of Ooty found from their enquiries that there was a definite improvement in the social and economic conditions of the persons who were addicted to drink before the introduction of Prohibition. The fact that in many village societies thrift days are celebrated regularly when substantial amounts saved by the members are collected and brought to account, goes to show beyond any doubt that the economic conditions of the villagers have definitely improved. Some of the societies which celebrated thrift days regularly are those at Kilatti Denad, Kilkotagiri, Kervan, Melbellicombai, Kadakkadu and Melcowhatti.

South Kanara District

One fishermen's co-operative society at Kaup, South Kanara District, was organised during the quarter end 31st March 1952 and was registered on 2nd April 19[illegible]. The formation of fishermen societies will benefit a[illegible] 30 to 50 fishermen families. They will be able to get [illegible]rn at subsidised rates from the Fisheries Department for manufacture and repairs of their nets. They [illegible] be advanced loans also which will enable them to be fr[illegible] from the clutches of the rich and middlemen merchants

Tirunelveli District

During the quarter the ameliorative staff have enquired into the socio-economic conditions of 23 ex-addicts' families in Tirunelveli and the following improvement in their standard of living was revealed in the enquiry.

The major part of their income spent in drinking in the pre-Prohibition days is now utilised by them for better food and clothing. Due to high cost of living though they are not able to save much, they are now able to spend more on their family needs without incurring debts. In some of the families they were able to discharge their old debts prudently with some amount of economy in their day to day expenditure. The children are now sent to school neatly dressed. Many of them are living in decent houses. The following illustration of the two families will show the benefits derived by the ex-tappers after the introduction of Prohibition.

I.	II.
1. Village—Kasiapuram, Tenkasi Taluk.	Thisayanvillai, Nanguneri Taluk.
2. Head of the family: V. Muthiah Nadar.	Sudalaimuthu.
3. Number of members of the family. 3 males, 2 females.	4 boys, 1 girl, 3 adults.
4. Average income before Prohibition. Rs. 60 per mensem.	Rs. 50 per mensem.
5. Average expenditure before Prohibition including drinking: Rs. 75 per mensem.	Rs. 60 per mensem.
6. Total debts incurred. Rs. 150.	Rs. 10 per month.
7. Average earning after Prohibition. Rs. 90 per month.	Rs. 85 per month.
8. Average expenditure after Prohibition spent on food and cloth. Rs. 80 per month.	Rs. 65 per month.
9. New assets purchased. Purchased one acre of dry land.	Purchased 50 cents of dry land.

South Arcot District

One Sri K. Kuttan of Eraiyur village in Tirukoilur Taluk was a terrible drunkard. He was leading a very bad life in the pre-Prohibition days. He ran into debts and lost his wealth by his drinking habit. When Prohibition was introduced his life was changed and he became sober. Now he has become a businessman. He is selling grinding stones, etc. He has purchased two bulls and some silver jewels for his wife. He is slowly recouping his lost wealth from his savings. He is leading a happy life with his wife and children.

Coimbatore District

The enquiries were made by the Special Senior Inspectors, jaggery manufacturing co-operative societies, into the economic and social conditions of the typical families in villages. The results of their enquiry are given below:

1. Athijoor village (Pollachi Taluk). The family of amaswamy Gounder.

Before Prohibition: Income Rs. 150 per month. penses:

(a) Domestic Rs. 100. (b) Liquor Rs. 30. (c) Other enses Rs. 20. Savings—Nil.

After Prohibition: Income Rs. 150. Domestic expes Rs. 120. Other expenses Rs. 20.

MAKING QUALITY JAGGERY: Practical demonstration on the manufacture of jaggery from Neera by the improved method. The Palm Gur Instructor explains to the trainees the colour, quality, durability and value of jaggery prepared under the improved method.

Total savings so far made Rs. 400.

2. Thottipalayam village. The family of Arunachala Gounder.

Before Prohibition: (a) income Rs. 140 per month.
(b) Expenses:

1. Domestic Rs. 90.
2. Liquor Rs. 20.
3. Other expenses Rs. 40.

Total debts incurred Rs. 200.

After Prohibition: (a) Income Rs. 150.
(b) Expenses:

1. Domestic Rs. 100.
2. Other expenses Rs. 40.

Debts—Nil.

Malabar District

Kandappadi Panham, son of Raman of Paral Amsom in Walluvanad Taluk, Malabar District, is an ex-addict, and now a tapper member of Karalmanna Jaggery Production Co-operative Society. He is a family man having a wife, one son and a daughter. Before the advent of Prohibition he was owning a small plot of barren hilly land with a thatched hut in it. He owned half an acre of land on lease. He was a toddy tapper and he used to spend

all his earnings on liquor, neglecting his wife. The family lived on their own earnings and were in a miserable condition.

After the introduction of Prohibition he became a member of the Karalmanna Jaggery Society and tapped sweet toddy for the manufacture of jaggery, and is now earning Rs. 3 to Rs. 4 per day. He was able to take on lease two acres of paddy fields and he, with his family, works in the fields to supplement his income. By dint of hard work along with his family, he purchased another plot of garden land measuring ¾ acre worth Rs. 750 and two pairs of buffaloes to plough the fields and garden land. He cultivates tapioca, ginger and planted arecanut trees and coconut trees in the garden land. From the income of the produce and the paddy sold after his requirements he constructed a tiled house which is worth about Rs. 2,000. He is now living a contented life with his family.

North Arcot District

Kanikaniyan, Vellore Taluk. Name of the ex-addict: Kannimandri.

Properties owned after Prohibition. Dry two acres. Cattle wealth Rs. 400. Cloth purchased Rs. 150; celebrated his daughter's marriage.

Cuddapah District

1. One Yeri Venkatanna, son of Ramudu of Devagudi village, Jammalamadugu Taluk, purchased 20 goats and a house worth Rs. 1,000.

2. One Danam Munaiah, son of Rami Reddi, Goneganur village of Jammalamadugu Taluk, purchased four acres of land and two bulls worth Rs. 1,500.

3. One Thalari Venkatanna, son of Nadipodu Thimmapurampet, Pulivendla Taluk, purchased 50 sheep and a house worth Rs. 1,000.

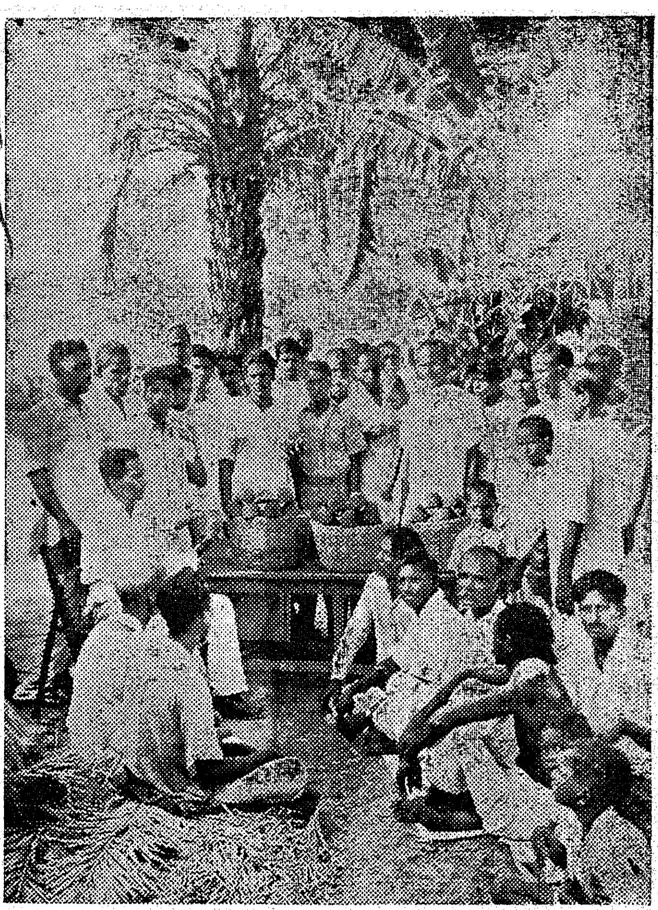
Anantapur District

A few specific and concrete instances of economic development in the condition of the ex-addicts after the introduction of Prohibition are given below :—

	Name.	*Economic status prior to introduction of Prohibition.*	*After introduction of Prohibition.*
1	Avalampalli village, Gooty Taluk, Bandam Narayana.	Nil.	Purchased five acres of land.
2	Vepamanipeta village, Kadiri Taluk, Ediga Narappa and Ediga Venkatesu.	Had a monthly income of about Rs. 20 per mensem.	They have since migrated to town and are doing petty business, earning Rs. 100 per month.

Kazi of Madras

The Government have appointed Janab Hajee Moulvi Mufti Muhammed Habibullah Sahib as the Kazi for the Sunnis in the City of Madras.



NEERA TECHNIQUE: *The members learn preliminary operation on date trees, proper application of lime and the difference between Neera and toddy tapping.*

Maintenance Allowance

The Government of India have issued the following Press Note:

The last date for submission of applications for the grant of Maintenance Allowance was the 30th November 1950. It is notified for the information of all concerned that applications received after that date will not be entertained. The Government of India will, however, continue to consider specially hard cases (e.g., death of the breadwinner after the prescribed date, contracting of a disease or disability after that date, which renders the applicant incapable of earning) *provided* the applications are made through the Deputy Commissioners or Collectors of the districts in which the applicants are residing.

Enhancement of Allowance.—Cases of all grantees are being reviewed by the Government of India, with a view to deciding whether any increase in the maintenance allowance already sanctioned, is admissible or not. As the number of grantees runs into thousands, the review is bound to take time. The review, however, will be automatic and it will not be necessary for grantees to make applications for the enhancement of their allowance.

Rural Welfare Activities

A brief note on the salient features of the activities of the Rural Welfare Department in the areas selected for Rural Welfare during February, 1952.

North Arcot District.—During the month under review, the following works were completed under the Collector's discretionary grants, the villagers having contributed half of the cost :—

1. Construction of a park at Kalasapakkam.
2. Provision of doors to bathroom at Ganvaram.
3. Construction of a shed at Veeralur Cheri.
4. Construction of eight Wardha Model latrines at Kadalady village.
5. Repairs to the existing well at Melapalur.
6. Repairs to the existing well at Kilpalur cheri.

The villagers of Karumapathy and Nallapillaipethal constructed and offered buildings worth Rs. 2,000 and Rs. 700 respectively for the location of schools free of rent. One adult school was opened at Salayanar village in Thurinjapuram firka.

Tiruchirappalli District.—Twenty-seven compost pits were dug ; ten trees were planted. Tools were distributed to 20 artisans in Musiri Firka.

A cattle show was conducted at Perambalur. Ten charkas were distributed ; 697 hanks of yarn were collected from the spinners during the month.

In the Vellakoil Centre, 31 cheris and 52 villages were visited. Thirty soak pits were cleaned and 20 constructed. Twelve latrines were cleaned and 14 put up. Fifteen mass sanitation drives were conducted.

Chittoor District.—In Nagari firka 24 sanitation drives were conducted ; four magic lantern shows were shown and six compost pits were dug.

South Arcot District.—Two short spinning courses for women were conducted at Sendanadu and Padur villages. Twenty women in each course were given training in ginning, carding, slivering and spinning for 15 days. Lectures were given to them on the economy of self-sufficiency in food and cloth, general health, sanitation and Gandhian way of Rural Reconstruction. On the last day of each training course, a spinning competition was conducted and prizes were awarded from the contributions collected from the villagers. Each trainee was paid a subsidy of Rs. 3 and 39 kisan charkas were also distributed to them.

Another short spinning course for 20 women was held on 15th February 1952 at Badrakottai. Fifty-eight charkas were issued in Kadambuliyur and Tirunavalur firkas and 1,067 hanks of yarn were produced during the month.

On 29th February 1952, a cattle show was conducted at Tiruvamur by the Veterinary Department. Bulls, cows, buffaloes, goats, rams, sheep, cocks, etc., were brought from several villages and exhibited at the show. Prizes costing Rs. 100 were awarded to the ryots who exhibited the best cattle and fowls at the show.

Two adult education centres were opened, one at Badrakottai for women and the other at Perumbattu for men. Equipments, such as lights, slates, books, etc., were supplied to these centres.

Ninety-four compost pits were dug up and 23 trench latrines were constructed in the month.

South Kanara District.—The first set of houses for the Koragas was completed and declared open by the Director of Harijan Welfare on 16th February 1952. The Collector of South Kanara presented cloths and saris worth more than Rs. 100 donated by the leading persons of Kumbla. They were distributed to the Koragas. A benefit drama was staged in aid of the Koraga colony work. Half an acre of waste lands was terraced. One beehive was introduced. One hundred and two hanks of yarn were collected in Kumbla. Twenty houses and their surroundings were got cleaned in Nileshwar, and propaganda on cleanliness was conducted in the Harijan colonies.

The Nilgiris District.—During the month under review, propaganda on compost making, soil erosion, etc., was carried on. Fifty-one compost pits were opened and ten manure pits were dug during the month. A sum of Rs. 778 was distributed to 114 ryots as compost subsidy. Four hundred and seventy-eight and half lb. of insecticides were supplied from the Ooty Agricultural Depot and an area of 22 acres were saved from pests and diseases. An amount of Rs. 2,700 was paid to eight ryots of the firkas, being agricultural loan for purchasing seeds and manure. Rural Welfare Day was celebrated at Palada. The Deputy Director (South) presided over the functions and the Collector of the Nilgiris opened the exhibition.

Sanitation drive was conducted by the Grama Sevaks in their respective groups. One Grama Sangam was formed in Kil-Kundah hamlet.

A public meeting was conducted at Bengalmattam and free distribution of improved tools (worth about Rs. 2,000) was made to encourage cottage industries to the nine selected artisans.

Tanjore District.—Eighteen charkas were introduced ; 1,222 hanks of yarn were produced ; 77 manure pits were dug ; 42 compost pits were laid ; 51 cheris were cleaned ; 70 bhajanas, prayers and congregational spinnings were conducted and two cub packs were formed during the month. A sum of Rs. 1,605 being the contribution from the villagers towards works was credited to Government.

Tirunelveli District.—Eighty-seven compost pits were dug ; ten charkas were sold ; 950 hanks of yarn were produced. Tools to the value of Rs. 3,326-8-0 were distributed to the artisans free of cost so far.

Anantapur District.—Cattle shows and two group tournaments were conducted and prizes were awarded. Thirty-five new compost pits were dug ; 25 charkas were distributed and a subsidy of Rs. 25 was paid to the self-spinners. One stud buffalo was purchased and a poultry farm was started during the month.

Chingleput District.—Thirty-three compost pits were dug ; 24 manure pits were opened and four manure heaps were covered with mud. Street cleaning was done in several villages during the month. First aid was rendered to 87 persons. Bhajanas and music classes were conducted at Pakkam.

West Godavari District.—During the month under review, a cattle show was organised at Gutala village. Fifty cattle were brought for the show. Prizes were distributed to the persons who maintained the cattle well. A mass sanitary drive and a spinning demonstration were held at Pandugudem. Khadi cloth worth Rs. 100 was sold to the public. Harijan Day was celebrated on 28th February 1952 at Dondapudi.

Cuddapah District.—Six new charkas were introduced; 40 compost pits were dug; two trench latrines were constructed; 203 tons of manure were produced; 62 sanitation drives were conducted; 59 cess pools were constructed; eight magic lantern shows were conducted and 142 manure heaps were properly preserved during the month.

Guntur District.—Thirty compost pits were dug; five magic lantern shows, 11 spinning demonstrations, 21 mass and 20 individual sanitation drives were conducted; 46 first-aid cases were treated in 17 centres and a drainage of 2½ furlongs in length was constructed in Guruvareddipalem centre.

In Ongole and Ammanbrole firkas, 72 hanks of yarn were produced by the self-spinners and 22 yards of cloth was produced. An amount of Rs. 20 was paid as subsidy to the self-spinners. Twenty adult night classes were conducted by the Rural Welfare staff.

Malabar District.—In Tellicherry, Kuthuparamba and Mattanur firkas, six culverts on roads were constructed. Fifty-two compost pits were dug in the firkas during the month. One hundred lb. of bone ash, 72 lb. of Kolinji seeds and 56 paras of seed paddy were distributed to ryots. Twenty acres of land in Tellicherry firka were brought under vegetable cultivation. Twelve charkas were introduced under the Extensive Khadi Scheme in Tellicherry and Kuthuparamba firkas.

In Payyanur area, one compost pit and one trench latrine were constructed. Forty lb. of Kolinji seeds and zinc phosphate were distributed among the ryots of Kunhimangalam and Vellur villages.

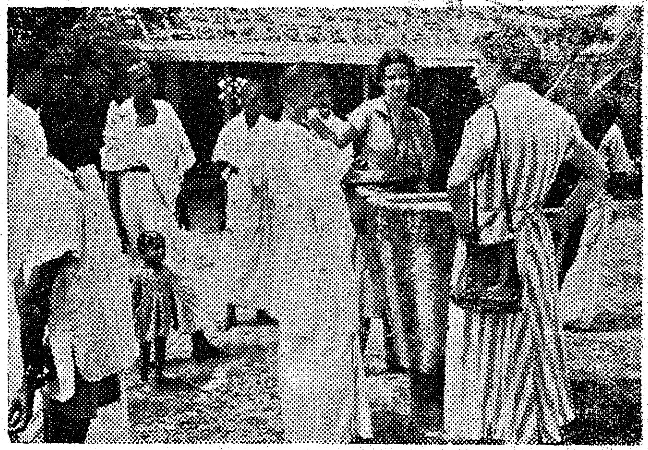
Kurnool District.—The Rural Welfare officers and the Grama Sevakas conducted mass and individual sanitation drives in several villages of the firka. In Kurnool firka, 13 compost pits were dug and 14 compost pits were filled up. Three insanitary pits were levelled up and three manure pits were removed from the villages. Four latrines were constructed in the firka.

In Yerragondapalem firka, 30 streets were cleaned. Thirty-one manure pits in Yerragondapalem firka and 17 in Tripurantakam firka were set right. Eighteen compost pits were dug in Yerragondapalem firka and eight in Tripurantakam firka.

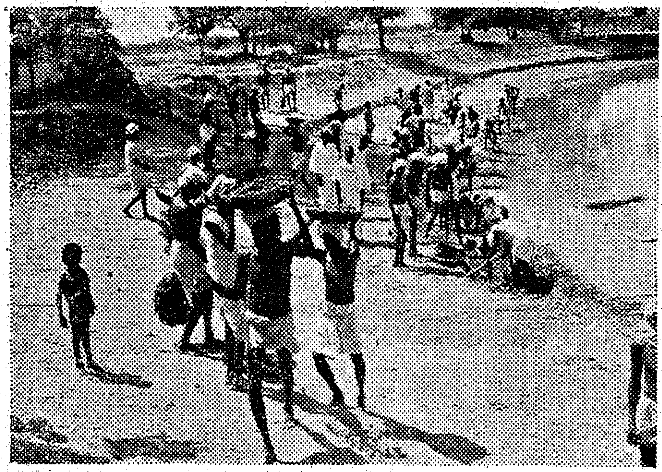
In Kurnool firka, 17 spinning demonstrations and 20 adult classes were conducted. One reading room was opened in Kurnool firka and one magic lantern show was also performed.

In Yerragondapalem firka, 26 spinning demonstrations while in Tripurantakam 33 demonstrations were conducted.

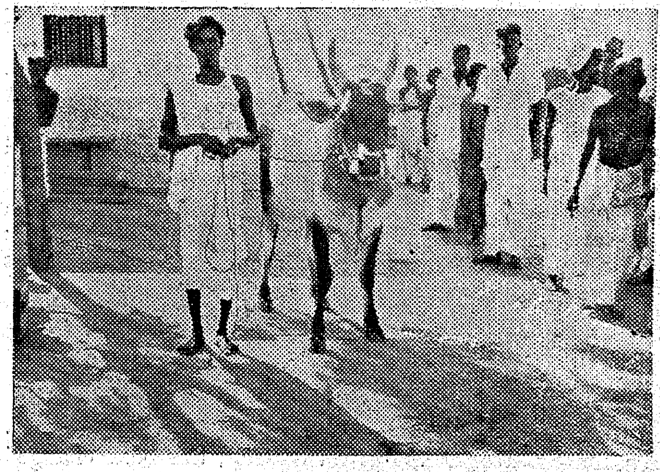
Visakhapatnam District.—During the month, 83 sanitation drives were conducted in Araku Valley firka and 25 hanks of yarn were spun; 37 adult classes were conducted; seven magic lantern shows were exhibited; 38 spinning demonstrations were conducted; 66 compost pits were dug and two cub packs were organised in Pendurthi firka.



BETTER TYPE OF GHANI: The Rural Welfare Officer of Tirumangalam explains to visitors Miss Nancy Damman and Miss Ellen B. Horan of the U. S. Consulate-General (Madras) the advantages of the Wardha type single bullock ghani.



SELF-HELP: The villagers of Thottiapatti (Madurai District) put in commendable concerted work to deepen the village tank.



QUALITY BREEDING: The Harijans of Chinnachettilotti jointly purchased this stud bull, with a little help from Government.

Ramanathapuram District.—During the month of February, 180 charkas were distributed among the villagers. The villagers were taught about the value of compost pits. The Kangayam bulls supplied to the firkas rendered good service. Five new wells were sunk and 100 old wells repaired so far. Roads up to the length of 11 miles and two furlongs have been formed so far.

Srikakulam District.—Thirty-six sanitary drives were conducted; 12 charkas were introduced; 79 yards of yarn were spun; 1,490 books were distributed in the month and 55 spinning demonstrations were conducted.

Nellore District.—A combined agricultural and industrial exhibition and cattle show was conducted at the Nidiguntapalem village of Surveypalli firka. Wide publicity was given to the Rural Welfare Scheme and the villagers were encouraged to make their villages self-sufficient.

During the month, 22 mass and 135 individual sanitary drives were conducted; 64 manure heaps were set right; six soak pits were constructed; 20 new compost pits were dug; 70 spinning demonstrations were given; 937 hanks of yarn were spun and 203 yards of khadi cloth were woven.

Krishna District.—A cattle show and an agricultural exhibition were held at Tiruvur on 21st February 1952. The best specimens of stud bulls (Ongole type and Murrah type), cows, buffaloes, bullocks, heifers, etc., were exhibited there representing from all the villages of Tiruvur and Vissannapeta firkas. The agricultural products from all the villages of Tiruvur, Vissannapeta and Nuzvid firkas were also exhibited at the exhibition. Prizes to a value of Rs. 600 were given away to the best specimens of cattle and agricultural products.

Six poultry units were started in the month by distributing six cockerels to the interesting ryots in Tiruvur and Vissannapeta firkas free of cost from Rural Welfare funds.

Three radio sets were installed in Vissannapeta and Nuzvid firkas. New branch Post offices were opened in the villages of Tiruvur Taluk.

Coimbatore District.—In Vellakoil centre, the Rural Welfare staff visited 61 hamlets and 25 cheris; 23 latrines were constructed and 28 latrines cleaned. The Special Agricultural staff visited 37 farms and opened 42 compost pits. To prevent soil erosion, formation of bunds around fields was advocated and bunds were formed in six holdings. A sum of Rs. 250 was disbursed by the Agricultural Department to the ryots of this area as subsidy for the manufacture of compost.

In Tirupur centre, seven well works were completed. A sum of Rs. 3,566 for road works and a sum of Rs. 1,581 for well works was spent during the month. Roads to a total length of one mile and two furlongs were formed during the period under review.

Bellary District.—During the month, 19 sanitation drives were conducted; 620 books were distributed; 50 compost pits were formed; 15 charka demonstrations were conducted and eight charkas were distributed.

Sivagalai

The name of the revenue village SEVALAI in Srivaikuntam Taluk, Tirunelveli District, has been changed to SIVAGALAI.

Co-operation and Rural Uplift

(*Continued from page* 29)

in the Chittoor District with the help of the funds provided by the local panchayat board, provincial welfare fund, etc. The area of the society extends to ten villages and the funds are derived from subscriptions from the members. It is running a dispensary and maintains a hospital. During 1950–51, 4,470 out-patients and in-patients were treated in the hospital. Eight maternity cases were also attended. The working of the society is encouraging. The success of the experiment is largely due to the co-operation received from the villagers. Such health co-operatives will go a long way to supplement the efforts of the State to maintain and improve the health of the people in the villages.

Co-operative societies are business organizations. Their success depends, therefore, upon the way in which they are managed by the people. If the co-operatives in the rural areas should function as live centres of rural development, there should be proper leadership in the villages. The Co-operative movement in the countryside provides an unlimited opportunity for honorary workers to do selfless service for village development. Every one owes a duty to his country to play his little part in bringing about general social uplift. Man is a social being and as the Tamil sage, Thiruvalluvar, said: "He alone lives who functions as social co-operator. He who does not recognise his duty is counted as dead." With the widening of the franchise and the spread of literacy, I have every hope that people in the villages will take an intelligent interest in the affairs of the co-operatives and work wholeheartedly for their success. For, on the success of the rural co-operatives depends largely rural prosperity and happiness.

(*By courtesy, A.I.R., Madras.*)

Forwarding Gifts of Fodder and Grain

The public are no doubt aware that many voluntary organisations and relief committees are endeavouring to procure gifts of fodder and grain from surplus areas of the State for the benefit of the deficit areas to relieve the distress caused by scarcity conditions on account of the failure of the monsoon. It has been represented to the Government that the collecting agencies are experiencing considerable difficulty in the matter of forwarding these gifts, because the local revenue officials had no instructions from Government as to the steps they should take. Instructions have since been issued.

Gifts of fodder and grain collected by the voluntary organisations should be received by the Tahsildars, who will despatch the gifts under instructions from the Collector of the district in which they are collected to the deficit areas, free of cost and with the utmost expedition. Donors and promoters of charity should take into account the distance and expenditure incurred on transport as against the value of articles donated.

Gift of Tuberculosis Ward

The Government have accepted with thanks the offer of the North Arcot District Tuberculosis Association to construct a Tuberculosis ward of 24 beds at a cost of Rs. 39,000, in the Government Pentland Hospital, Vellore, and hand it over to Government for maintenance.

List of Donations to the Madras State Famine Relief Fund

Following is the list of donations to the Madras State Famine Relief Fund :—

No.	Donor	RS.	A.	P.
1	The Hon'ble Pandit Jawaharlal Nehru from the Prime Minister's Fund for Food Relief.	2,00,000	0	0
2	Shri Rajendra Prasad, President of the Indian Republic.	1,000	0	0
3	Dr. John Matthai on behalf of Sir Dorab Tata Trust.	25,000	0	0
4	H.E. Shri Sri Prakasa	1,000	0	0
5	Sri S. Anantharamakrishnan	1,001	0	0
6	Sri Manjeshwar Gopala Krishna Prabhu.	1,000	0	0
7	The President, Bandar Nagayalanka Bus Operators' Union, Masulipatnam.	500	0	0
8	Sri V. K. Thiruvenkatachari ..	(each).		
9	Sri Jyotibushan Gupta			
10	Srimathi Kamini Devi			
11	Sri T. Sadasivam	250	0	0
12	Sri G. L. Mehta	(each).		
13	Sri Radhakrishna Groundnut Oil Mills, Guntur.	116	0	0
14	The Secretary, Guntur Medical Club, Guntur.	(each).		
15	Messrs. Bansiram Virbandas, G.T., Madras.	101	0	0
16	The Secretary, Tinnevelly Co-operative Central Stores, Limited, Tuticorin.			
17	Mrs. M. N. Clubwala			
18	Mr. Phiroj Nogi Clubwala	100	0	0
19	The Trustees to the late Mrs. S. P. Clubwala Settlement.	(each).		
20	The Hon'ble Justice E. E. Mack, I.C.S.			
21	Sri V. Nagaiah, Kovur, Guntur District.	90	0	0
22	Agent, Central Bank of India, Ltd., Vijayavada.	53	0	0
23	Sri S. V. Rama Iyer	50	0	0
24	Sri K. Bhaskaran Tampan, Ottapalam.	29	0	0
25	Sri K. Ragunathan, Mylapore ..			
26	Everett F. Drumwright, New Delhi ..			
27	Sri P. Aswathanarayanaiah, Razole ..	25	0	0
28	Proprietor, Messrs. Jitendra Foundry, Rajahmundry.	(each).		
29	T. K. Ramanuja Kavirayar, Tirunelveli.	20	0	0
30	Sri Mohan Chandra, Bhadohi, U.P. ..	11	0	0
31	Sri T. C. Kalloor, Madras	10	0	0
32	Sri T. V. Subramaniam, Coimbatore..	(each).		
33	Sri Sankaran Nair, Kottakkal ..	5	4	0
34	Sri C. A. Krishna Kumar, Cuddapah.			
35	Sri P. S. P. Madhava Rao, Repalle ..			
36	Sri Pratti Sitaramayya, Duggirala ..	5	4	0
37	Sri Kumari Rani, Tenali	(each).		
38	Sri Jonnalagadda Sreeramamurthi, Chebrole, Guntur District			
39	Sri A. P. Veeraraghavan, Madras ..			
40	Sri V. K. Sarma, Madras-17	1	6	0
41	Sri V. S. R. Prasad, Pedapalam ..	2	0	0
42	Sri N. Madhusudan Rao, Tenali ..			
43	Sri A. K. Krishnamurthi, Tenali ..			
44	Sri P. V. Suryanarayana, Banaras ..	1	0	0
45	Sri Gian Prakash, New Delhi ..	(each).		
46	Sri A. S. Mani, Madras			
47	Sri C. Kuppuswami, Salem	0	8	0
48	Mr. J. J. Batlivala, Treasurer, Southern Railways, Head Office, and from Deputy Chief Accounts Officer, Southern Railways, Madras.	1,246	13	1
49	Secretary, The Anakapalle Merchants' Association, Anakapalle, Visakhapatnam District.	1,116	0	0
50	Mrs. Raksha Saran, Madras	501	0	0
51	Sri M. Parameswara Iyer, Madras ..	(each).		
52	Sri Jyotibushan Gupta, Banaras ..	500	0	0
53	Messrs. N. T. Patel & Co., Madras ..	(each).		
54	Sri V. Parashuram Mudaliar, Sagaon (Berar).	201	0	0
55	The Secretary, Teachers' Association, All Saints High School, Hyderabad.	200	0	0
56	Sri M. Bapineedu, Madras	150	0	0
57	Air Voice Club, A.I.R., Vijayavada ..			
58	The Executive Officer, Panchayat Board, Nidadavole.	116	0	0
59	Treasurer, Rotary Club of Bezwada, Vijayawada.	(each).		
60	Messrs. Lakshmi Glassware Mart, Madras.	101	0	0
61	Superintendent, Government Secondary and Training School for Women, Kohikode.	(each).		
62	Sri K. Venkatarama Iyer, Madras ..	100	0	0
63	Sri V. Shanmuga Mudaliar, Madras ..	(each).		
64	Messrs. C. J. Sheth, Madras			
65	Messrs. S.U.S. Davey Sons, Madras ..	51	0	0
66	Dera Nawab Wale, Branch, Ambala City.	(each).		
67	Sri P. Govinda Raj, Bangalore ..	26	0	0
68	Sri P. Aswathanarayanaiah, Razole, East Godavari District.			
69	Proprietor, Messrs. Jitendra Foundry, Rajahmundry.	25	0	0
70	Sri V. Singara Mudaliar, Nellore ..	(each).		
71	Sri T. K. Ramanuja Kavirayar, Tirunelveli.	20	0	0
72	Sri M. V. Ramakrishna Rao, Madras.	19	6	0
73	The Staff of Taluk Office, Razole, East Godavari District.	18	8	0
74	Sri V. Sankaran Nair, Kottakkal, South Malabar.	15	0	0
75	Sri Ved Prakash Murwaha, New Delhi.	11	0	0
76	Sri S. Srinivasa Rao, Visakhapatnam.	(each).		
77	Sri T. V. Subramaniam, Coimbatore..			
78	Sri S. N. Gupta, Agra (U.P.)			
79	Sri Kidar Nath Batra, Jhansi ..	10	0	0
80	Sri M. Subramaniam, Palayamkottai.	(each).		
81	Sri Valji Govindji Desai, Poona-4 ..			
82	Sri A. Srinivasa Raghavan, Pudukkottai.	7	1	0

		RS.	A.	P.
83	The Agricultural Demonstrator, Nuzvid.	8	8	0
84	Sri N. Venkateswaran, Mangalore ..			
85	T. K. Rajagopalan, Bhavanisagar ..			
86	Sri E. Singaram Pillai, Tiruchirappalli.	5	0	0 (each).
87	Sri M. Ramasubbiah, Cuddapah ..			
88	Sri B. Nagappan, Kurnool			
89	Sri Raghuram Bhat, Kurnool ..			
90	Sri Mandapati Subbi Reddy, Arthamaru, East Godavari District.			
91	Janab M. Khader Hussain Sahib, Karathadipalayam, Coimbatore District.	4	0	0 (each).
92	Sri V. V. Srivatsa, Madras	2	1	0
93	Sri Shantilal Harilal Desai, Jibhaipole, Mehadabad, District Kaira, Gujerat.			
94	Headmaster, Board Hindu Boys' Elementary School, Krishna District.	2	0	0 (each).
95	Sri R. Irulappan Servai, Madurai ..			
96	Sri A. S. Mani, Madras	1	0	0
97	Amount collected and remitted by the President, Sri Gujerathi Mandal, 170, Netaji Road, Madras.	2,120	12	0
98	His Highness the Maharaja of Bhavnagar, Royal Cottage Palace, Bangalore.	2,000	0	0
99	Vasantha Mills, Limited, Singanallur, Coimbatore District.	2,000	0	0
100	Sri T. Vijayaraghavacharya, Riverside, Adyar, Madras.	1,000	0	0
101	Ashok Motors, Limited, 13, Haddows Road, Madras-6.	1,000	0	0
102	Messrs. Seshasayee Brothers, Limited, 120, Armenian Street, Madras-1.	1,000	0	0
103	Public Affairs Officer, U.S.I.S., 158 Mount Road, Madras-2.	923	0	0
104	President, Common Welfare Uplift Youths Association, Ootacamund.	505	11	7
105	The Managing Partner Sri Mandava Lakshmaiah & Co., Jagannadhapuram, Masulipatnam.	500	0	0
106	His Highness the Maharaja of Cochin.	500	0	0
107	Theosophical Society, Adyar ..	500	0	0
108	Mr. Arthur W. Ghater, P-21, Mission Row Extensions, Calcutta-13.	500	0	0
109	Shri M. S. Aney, Governor, Bihar ..	500	0	0
110	Kumari Ila Sen, Honorary Secretary, Guild of Service, Visakhapatnan.	500	0	0
111	Wing Commander R. N. Chawla, 3, Equipment Depot, I.A.F. Station, Avadi.	477	3	6
112	Vijayavada Co-operative Central Bank, Limited, Vijayavada.	425	10	0
113	Staff of Salt Cotaurs, Southern Railways, Madras.	375	8	9
114	Sri N. S. Arunachalam, I.C.S., Collector of Madurai.	300	0	0
115	Sri A. Vaidyanatha Ayyar, Advocate, Madurai.	250	0	0
116	M. Shiva Rao, President, South Kanara Central Co-operative Wholesale Stores.	250	0	0
117	Sri K. Santhanam, Lient.-Governor, Reva, Vindhya Pradesh.	200	0	0
118	Janab Mohomed Usman, Teynampet Garden, Madras.	200	0	0
119	Sankari Panwala Association, Sankaridrug R.S., Salem District.	160	0	0
120	Sri H. V. Sivanatham, Secretary, Famine Relief Committee, Indian Institute of Technology, Kharagpur.	150	0	0
121	Sri T. Rajamannar, Honorary Secretary, Thattikonda, Nacharamma Charities, Chetput, Madras.	120	0	0
122	Honorary Secretary, Madras Piece-goods Merchants' Association, 100, Godown Street, G.T., Madras.	116	0	0
123	Secretary, Timber Dealers' Association, P.P. Ballarpur, Chanda District (M.P.).	116	0	0
124	Ryots of Madamamur village, Nellore.	116	0	0
125	Sri M. Balarama Reddy, Landlord, Buchireddipalem, Nellore.	116	0	0
126	Messrs. S. Krishnaswamy and P. Suryanarayana, 11-12 Second Line Beach, Madras.	116	0	0
127	Sri. S. S. Paripurnam, representing the the staff of Messrs. Gannon Dunkerley & Co. (Madras), Limited.	108	13	0
128	Janaki Ammal, c/o S. Venkataraman, Advocate, 5/41, Grey Town, Coimbatore.	100	0	0
129	Messrs. Shamdas Chandumal, 179, Samuel Street, Bombay.	100	0	0
130	Dr. B. S. Joshi, Civil Surgeon, Tavoy, Burma.	100	0	0
131	The Superintendent, Lady Ampthil Government Secondary and Training School for Women, Masulipatnam.	100	0	0
132	Sri K. P. Jagannathan Chettiar, Pannakadu, Kodaikanal Taluk.	100	0	0
133	Miscellaneous collections (below Rs. 100).	1,594	10	0

The donations to the Madras State Famine Relief Fund reached the total of Rs. 3,75,313-5-11 on May 6, 1952. The following is the list of donations of Rs. 100 and above. Amount received up to 26th April 1952 :—

		RS.	A.	P.
	(Already published in newspapers).	2,57,299	11	11
134	The Hon'ble Prime Minister of India.	1,00,000	0	0
135	Donation from the Madras Provincial Welfare Fund, Madras.	10,000	0	0
136	Sri Pannalal Bansilal, Hyderabad ..			
137	His Highness the Maharaja of Cooch-Behar.	1,000	0	0 (each).
138	The Secretary to His Excellency the Governor of Bombay.			
139	Donation from the Kanaiyalal Motilal Charitable Fund, Madras.	500	0	0 (each).
140	Sri Indra Devi Sachar, Tara Cottage Estate, Nainital.			
141	From the staff of the I.B.I., Madras Branch.	417	0	0
142	Sri J. Balaji Rao, Diwan, Ramanathapuram Samasthanam. Donation representing cost of silver casket presented to the Raja of Ramanathapuram.	350	0	0

		RS.	A.	P.
143	Messrs. Batlibai & Co.	250	0	0
144	Imperial Bank of India (Clerical and Cash Department).	228	8	0
145	Srimathi Diraviam Ponnammal, Madurai.	201	0	0
146	The Madurai Vermicelli Manufacturers and Merchants Association, Madurai.	200	0	0
147	Dr. A. Lakshmanaswami Mudaliar, Madras.	150	0	0
148	From the Directors and Members of the Mettupalaiyam Co-operative Urban Bank Limited, Mettupalaiyam.	115	0	0 (each).
149	Staff of the National Bank of India Limited, Madras.			
150	Sri V. Periaswamy, Colombo			
151	Messrs. V. N. Kumaraswamy & Sons, Madras.	101	0	0 (each).
152	Proprietor, Messrs. Sri Ram & Son, Delhi.			
153	Sri Shanmugasundara Mudaliar, Madras.			
154	Madurai District Famine Relief Committee.			
155	Sri A. Ponnuswami Pillai, Tiruchirappalli.	100	0	0 (each).
156	Seth Mangoomal Atmasingh, Bombay.			
157	Miss M. O. Woodhouse, Meerut ..			
158	Sri K. C. Eashwar, Indore City ..			
	Miscellaneous contributions (below Rs. 100 received subsequent to 26th April 1952).	1,084	2	0
	Total so far ..	3,75,313	5	11

Transport Advisory Committee Reconstituted

The Government have reconstituted the Transport Advisory Committee for the Government Bus Service, Madras City, for a period of one year with the following persons as members:

Secretary to Government, Home Department—*Chairman*; Assistant Transport Commissioner, Madras—*Secretary*; (1) The Transport Commissioner, Madras; (2) The Deputy Commissioner of Police (T. and L.); (3) The Mayor of Madras or his nominee; (4) Sri C. Rajam Ramaswamy, M.L.A.; (5) Sri A. M. Sambandam, M.L.A.; (6) Sri S. Rangarajan of *The Hindu*; (7) Sri K. S. Janakiraman, Joint Secretary to the Commercial Employees' Union, Madras; (8) Sri B. D. V. Ramasamy; (9) Sreemathi Raksha Raghunandan Saran; (10) Sreemathi Padmini Raghavan, B.A., B.L.; (11) Sri K. Kannankutty Menon, President, N.G.O.'s Association; (12) Sri N. S. Rajamannar, Secretary, National Union of Students of India, Madras State Organizing Committee; and (13) Sri Rajah J. Swamidoss, Superintendent, Education Department.

The function of the Committee will be purely advisory and will be confined for the present to advising on questions relating to routes, bus fares, amenities to passengers, advertisements and any other allied subjects, pertaining to the bus service, Madras City. Matters relating to workers' welfare or wages shall not come within the purview of the Committee.

New Routes and More Buses

The Government have issued instructions that the Regional Transport Authorities should be more liberal in granting additional bus permits in the existing routes or opening up of new bus routes or giving additional timings to vehicles doing less than the maximum mileage. But at the same time care has to be taken to see that the interest of the existing operators are not adversely affected, and that unnecessary competition with the Railway is avoided.

In this connection, the Government have observed that there is still terrific competition for State carriage permits with attend nt malpractices and that cases of overloading are still rampant especially on several mofussil routes. The railways are also still unable to cope with the increasing traffic, and hence the need for this revised policy.

Textile Dyeing and Printing Works Exempted from Sales Tax

The Government have directed that textile dyeing and printing works be exempted from liability to Sales Tax for the year 1950-51, *i.e.*, from 1st April 1950 to 31st March 1951.

Gift of Maternity Home

The Government have accepted, with thanks, the offer made by the Government Hospital Maternity Home Buildings Committee to construct a maternity ward of four beds at an estimated cost of Rs. 15,000, in the Government Hospital, Wandiwash, and hand it over to Government for maintenance.

Recognition of Aligarh Degree

The Government have directed that the B Sc. (Electrical) Degree of the Muslim University, Aligarh, be deemed as equivalent to the B.E. (Electrical) Degree of the Madras University.

The Government have also directed that holders of the B.Sc. (Electrical) Degree of the Muslim University, Aligarh, be appointed to posts in the Madras Electrical Service and the Madras Electrical Subordinate Service, when suitable candidates possessing the B.E. (Electrical) Degree of the Madras University are not available.

Sales by Agents of Government

The Government have directed that all sales by agents of the Government of Madras, should, in the absence of orders to the contrary, be held liable to Sales Tax, unless they hold a licence under Section 8 of the Madras General Sales Act, 1939.

Study of the Constitution

INTRODUCTION TO INDIAN ADMINISTRATION

By M. R. PALANDE, M.A.

Oxford University Press.

Pages 497. *Price Rupees six*

The framing of the new Constitution has entirely changed the structure of Indian administration, and Professor Palande has therefore utilised the opportunity for reissuing a completely revised edition of his book, published originally in 1937.

The author restricts his historical and analytical treatment of the British administration in India, from the days of the East India Company to the advent of independence in 1947, to a third of the book. The rest of the book is devoted to a detailed study of the new Constitution.

Part I—the historical portion of the book—starts off with a brief but lucid survey of political development from the period of the British conquest to the 1935 Act, touching lightly on the various Parliamentary Acts, the Minto-Morley Reforms, the Montford Reforms, the 1919 Act, the Simon Commission, the Round Table Conferences, the 1945 Act, the Cripps Mission, the Cabinet Mission, down to the Interim Government and the Acceptance of Partition.

In subsequent chapters, the key role of the Secretary of State for India is outlined; as for the Indian High Commissioner, ". . there was reason to believe that pressure was brought on him to observe some kind of preferential discrimination in favour of British and British Empire products." The British exercised determined control over Indian affairs and so "reciprocity was only a euphemism for British dictation". The Governor-General enjoyed "supreme eminence in the State," and the Executive Council was only a bureaucratic body; "Elevation to the Executive Council was among the principal attractions of the Indian Civil Service." The communal electorate system for the Central Legislature bolstered up minorities, while the franchise of the Central Council created a body of vested interests "inevitably drawn into an alliance with the bureacracy as against the declared wishes of the popular chamber."

The Federal structure envisaged in the 1935 Act never came into being because the war intervened, and Lord Linlithgow, the Viceroy, shelved the scheme. The Federation proposal posed the delicate question of the scope of paramountcy; ". . . . the task of securing the accession of the Princes was full of difficulty."

The author underlines the point that the experiment of dyarchy in India "proved to be incapable of yielding really satisfactory results" since a vital condition,—"the complete self-effacement of an irresponsible bureaucracy"—was not satisfied. Provincial autonomy was, on the whole, a fair success; the Services co-operated with the Ministers, the Governors, 'played the game'. But World War II interrupted the progress on these lines, and the Bengal Famine high-lighted the need for "strong centralized and common action" in times of a grave emergency.

As the author points out, some time must elapse before the working of the new Constitution crystallizes into definite shape. Part II of the book therefore gives a non-critical description of the Constitution under the following Sections:

I. *General.*—Main features, the Indian Union, fundamental rights, directive principles, the Union and the States, Federation, distribution of subjects, the three branches of Government.

II. *The Union Government.*—The President, the Cabinet, the Legislatures, the Supreme Court, the Attorney-General and the Auditor-General.

III. *The State Government.*—Part A, B and C States, the Governor, the Council of Ministers, the State Legislatures, the State Judiciary, subdivisions, local-self government.

IV. *Miscellaneous.*—Public services, elections, backward classes, official languages, emergency provisions, amendments to the Constitution, schedules.

This portion of the book is a masterly exposition of the provisions of the Constitution, and the explanations, related in the simplest terms, of the complexities of the Articles, are a noteworthy feature. While modestly purporting to give an introduction to Indian administration, the author has actually presented a valuable guide, comprehensive and exhaustive, which students of politics as well as our new legislators will assuredly appreciate.

—P.V.S.

A GANDHI ANTHOLOGY

(Book I)

Compiled by VALJI GOVIDJI DESAI.

Navajivan Press, Ahmedabad.

Pages 60 *Price annas eight.*

Bapu had a thrilling gift for expressing patent and latent truths in ringing phrases. There is little of the woolly rigmarole of generalised half-truths—the stock-in-trade of the professional politician—in the vast mass of Gandhiana that have come down to us.

In this little pocket-sized book Sri Valji Desai has made a telling collection of quotations from the speeches and writings of the Mahatma, classified under a variety of heads—death, martyrdom, the drink evil, gambling, non-violence, swadeshi economy and so on.

—P.V.S.

Expansion of N.C.C. Junior Division

The Government have decided to expand the Junior Division of the National Cadet Corps in the Secondary Schools in the State in the coming academic year and sanctioned the formation of 30 fresh sub-units consisting of 30 cadets for each sub-unit. To provide for the officers for these units and to fill up substitutes for officers who have left the units 40 teachers from various schools have been selected for pre-commission training in the Regional Centre at Wellington for two months from the 1st May 1952. Provision has also been made for a Naval Wing and an Air Wing of the Junior Division.

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS, AND EDITED AND PUBLISHED BY THE DIRECTOR OF INFORMATION AND PUBLICITY, GOVERNMENT OF MADRAS.